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CURRENT ISSUES IN HIGHER EDUCATION

1961

GOALS FOR HIGHER EDUCATION IN A DECADE OF DECISION

ASSOCIATION FOR HIGHER EDUCATION

A Department of the National Education Association

1201 Sixteenth Street, N.W., Washington 6, D. C.

1961

Current Issues in Higher Education

Goals for Higher Education in a Decade of Decision

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THE PROCEEDINGS
OF THE
SIXTEENTH ANNUAL NATIONAL
CONFERENCE ON HIGHER EDUCATION

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A Department of the National Education Association
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Contents

Foreword ix

Notes and Acknowledgments xi

GENERAL SESSION ADDRESSES

The Happy Crisis in Higher Education 3 *Charles Frankel*

The Role of Science in Peace and War: Implications for Higher Education 12 *William C. Davidon*

The Role of Science in U.S. Policy: Implications for Higher Education 19 *Saville R. Davis*

Are Fundamental Changes Required in Higher Education? 24 *Byron K. Trippet*

Wanted: Experimental Centers for the Creation of World Civilization 30 *Theodore Brameld*

Higher Education and the Future of Mankind 38 *Robert Ulich*

The Role of Higher Education in the Developing Space Age 44 *Robert C. Seamans, Jr.* *Robert Jastrow*

SUMMARY AND ANALYSTS' STATEMENTS

Summary of the Discussion Groups 63 *William E. Porter*

STUDENTS

External Testing Programs and the Schools 77 *Charles C. Holt* 81 *John C. Palmer*

Development of Admission Criteria for Colleges and Universities That Will Not Eliminate Such Applicants as the Bright Nonconformist, the Underchallenged, and the Individual with Highly Specialized Ability 86 *Sarnoff A. Mednick*

Characteristics of the Creative Person: Implications for the Teaching-Learning Process 89 *Donald W. MacKinnon*

Institutional Policy in Relation to Student Rights in Controversial Situations 93 *E. G. Williamson*

Opportunity Must Follow Encouragement 97 *Rexford G. Moon, Jr.*

The Most Effective and Helpful Means of Educating and Dealing with the Increasing Number of Foreign Students Attending American Colleges and Universities **101** *James M. Davis*

FACULTY

Identifying Early the Potentially Good College Teacher and Encouraging Him To Enter a Career of Scholarship and Teaching **105** *Kenneth I. Brown*

Responsibilities of the Individual Faculty Member and His Institution for Increasing His Teaching Ability and Professional Stature **109** *Jeremiah S. Finch*

Goals, Practices, and Procedures for Implementing Joint Responsibility for Institutional Policy Formation and for Instructional Evaluation and Improvement **112** *Fred Harrington*

Constructive Ways in Which the Effectiveness and Ethics of the Academic Market Place Can Be Improved **115** *Reece McGee*

CURRICULUM

Insights from One Profession Which May Be Applied to Educating for Other Professions **120** *William J. McGlothlin*

The Role of Higher Education in the Development of Effective Certification Standards for Secondary School Teachers **124** *Francis S. Chase* **127** *William P. Viall*

The Role of Philosophy in General Education **129** *T. William Hall*

Updating General Education Courses in the Natural Sciences **133** *Chester A. Lawson*

Updating General Education Courses in the Fine Arts and Humanities **136** *Louis T. Safer*

Updating General Education Courses in the Social Sciences **140** *Jack T. Johnson*

Goals for the Future of Undergraduate Education **144** *Paul L. Dressel*

Establishing and Maintaining Better Curricular Articulation Between Secondary and Higher Education — 148 *Jack N. Arbolino*; 150 *James D. Logsdon*

Implications for the Undergraduate Curriculum of the Growing Importance of International Affairs and the Mounting Need to Understand World Cultures — 153 *Edward H. Buehrig*

Possibilities for Improving the Master's Degree To Render It a More Effective Means of Preparing College Teachers — 157 *Robert J. Henle, S.J.*

Maintaining Curricular Balance in an Era of Expanding Governmental Activity and Financing, Growing Industrial-Business Interest and Financing, Periodic International Crises, and Strongly Held Societal Values — 161 *Thomas C. Donohue, S.J.*

THE INSTITUTION AS AN ORGANIZATION

The Trimester Plan of the University of Pittsburgh — 167 *Alan C. Rankin*

Evaluating the Total Climate or Profile of a Campus — 171 *C. Robert Pace*

Effective Means of Evaluating Programs in Small Colleges and Developing Long-Range Plans When Limited Resources for Planning Are Available — 176 *A. T. Hill*

Goals and Techniques of Business, Industry, and Government That May Be Applicable to the Administration of Higher Education — 181 *H. J. Henneman*

Systematic Financial Analysis and Budgetary Planning as Aids in the Attainment of College and University Purposes — 185 *Clarence Scheps*

Establishing and Maintaining Cooperative Programs Between Institutions of Higher Education — 189 *Blair Stewart*

Intercollegiate Athletics and Higher Education — 193 *Fred C. Cole*

Ways in Which American Higher Education Can Better Inform the Public of Its Goals, Values, Needs, and Opportunities — 197 *Kenneth M. Cuthbertson*

THE INSTITUTION AND SOCIETY

The Implications for Higher Education of the Growing Urbanization and Industrialization of American Society — **201** *Charles W. Eliot, 2nd*

The Future Goals of the Junior College — **203** *James W. Reynolds*

The Future Role of the Church-Related College — **207** *Virgil C. Blum, S.J.*
210 *John D. Mosely*

Establishment of Better Relations Between All Levels of Government and Institutions of Higher Education — **213** *Arthur S. Flemming*

THE INSTITUTION AND WORLD AFFAIRS

The Proper Role of Higher Education in the Development of the Peace Corps — **214** *Lawrence E. Dennis*

Overseas Travel-Study Programs in U.S. Higher Education — **220** *Irwin Abrams*

What Faculty Members Can Do on the Issue of War and Peace — **224** *Richard C. Snyder*

INFORMATION SESSIONS

Commentary on Recent Literature on Higher Education — **231** *Ruth E. Eckert*

Current Legislative Issues Before Congress — **233** *Ralph C. M. Flynt*

Report on Developments in Segregation-Desegregation — **235** *Reed Sarratt*

Reports on Research Projects in Higher Education — **236** *John K. Folger*
237 *Edwin Hindsman*
238 *J. Kenneth Little*
239 *Allan O. Pfnister*
240 *Felix C. Robb*

Compensation on the Campus, Direct and Indirect — **242** *J. Fletcher Wellemeyer*
243 *Margery S. Foster*
244 *Raymond C. Lewin*
245 *Walter H. Mais*

Patterns of Representative Programs in General Education: Colgate University, California Colleges, University of South Florida, — **247** *Wendell H. Bash*
248 *James W. Brown*
249 *Sidney J. French*

Stephens College, Goddard College, and Monteith College — 250 *Ralph C. Leyden*; 251 *Royce S. Pitkin*; 252 *Woodburn O. Ross*

Summary of Recent Studies Relating to Educational Exchange — 254 *Donald B. Cook*

Establishing Systems Whereby Institutions Can Teach More Students Faster and More Efficiently — 257 *Armand L. Hunter*; 258 *Harry J. Skornia*; 259 *W. A. Wittich*

The Wood Dynamic Reading Process — 261 *Evelyn N. Wood*

The Future Role of the East-West Center in Hawaii — 263 *Murray Turnbull*

Conference Resolutions 267

Conference Committees 273

Index 277

Foreword

Complacency is not the prevailing mood in American colleges and universities if the papers published in this 1961 edition of *Current Issues* are an accurate reflection of campus thinking. Those who selected "Goals for Higher Education in a Decade of Decision" as the theme for the Sixteenth National Conference on Higher Education were aware that looking into the future at this time was something like searching in a large, dark hall with a small flashlight. Only a few shapes would appear; the vastness of the hall would remain unknown. Still the Planning Committee believed that an attempt should be made to forecast trends in higher education and the problems they would pose.

In retrospect, the conference did do at least two things; it underlined the complexity of the job ahead and the tasks to be undertaken. Early in the conference, for example, William Davidon and Saville Davis illustrated the inherent difficulty of planning for the future by dramatically pointing out to conference participants how the realities of nuclear and political science today bring into jeopardy the very survival of civilization. Another mind-stretching experience was the address and visual presentation by Robert C. Seamans, Jr., and Robert Jastrow, two high officials of the National Aeronautics and Space Administration. Now that thrusts into outer space and moon explorations are no longer confined to science fiction, as they pointed out, the responsible educator has whole new complexes of implications to ponder.

Philosophers as well as scientists at the conference emphasized the gravity of the present hour in world history. One of them, Robert Ulich, said, "This is nothing less than the humanity of man struggling for civilized survival on a cosmic scale." Another philosopher, Charles Frankel, disagreed. "The problems," he said, "which seem to have exploded in our faces, are not in fact new problems. They are old problems simply brought to sharper focus."

On one imperative, all speakers seemed to agree: higher education must help build a two-way bridge between science and the humanities. There were frequent references to the dilemmas explored by C. P. Snow in *The Two Cultures and the Scientific Revolution* and in *Science and Government.* Over and over again, conference speakers faced the question of communication between the sciences and the humanities, of providing students of literature, philosophy, and the arts with substantive knowledge of science, and scientists with a deep appreciation of humane values.

To Theodore Brameld the "mortal danger" that man would destroy himself and all his works seemed so ominous that he pleaded for the establishment of a substantial number of Experimental Centers for the Creation of World Civilization, in both larger universities and small colleges. In the same session, by contrast, Byron K. Trippet warned against expecting "salvation through education. I am skeptical," he said, "of the wisdom of making education an instrument of national policy and purpose."

William E. Porter, who prepared the summary report of the discussion groups, selected as key words for the mood of this conference "the specific" and "the

pragmatic." If the task of undertaking a comprehensive exploration of the problems of higher education in the next decade and of agreeing on goals was too overwhelming to achieve immediately, the participants were occupied with some next practical steps.

May 5, 1961 G. KERRY SMITH

Notes and Acknowledgments

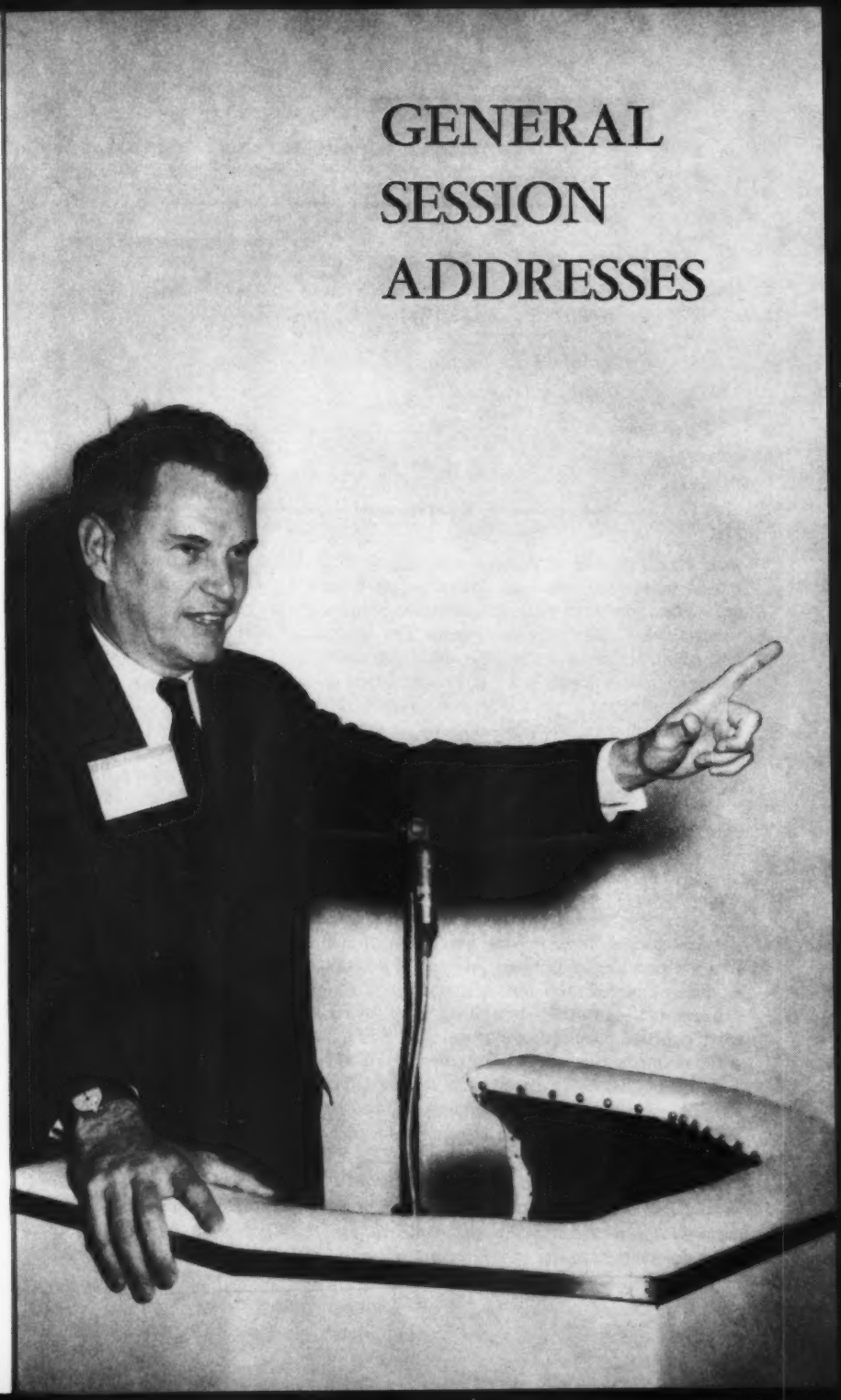
The Sixteenth National Conference on Higher Education brought together more than 1450 participants from fifty states and four foreign countries. They represented 581 colleges and universities, both public and private, and 121 lay, professional, and governmental organizations and agencies. The conference is sponsored each year by the Association for Higher Education, an organization of faculty members, administrators, and others professionally engaged in higher education. By means of this annual conference and through a wide variety of other activities—publications, research, legislative liaison, and special projects—the members of the Association unite in a common effort to promote the cause of higher education.

The editor of CURRENT ISSUES IN HIGHER EDUCATION, 1961, the report of this year's conference proceedings, takes distinct pleasure in extending grateful thanks to each conference leader, to every member of the Association for Higher Education Planning Committee and Executive Committee, to the Washington consultants, to the many individuals who sent in suggestions for the conference, to members of the Resolutions Committee, and to the Chicago Board of Education. The editor wishes particularly to thank every member of the Association for Higher Education staff, each of whom had a share in the planning for and organization of the conference.

Since each author speaks for himself, neither the Association for Higher Education nor the institutions or organizations by which the authors are employed are responsible for the statements made herein. Particular credit for the major portion of the editing of the materials contained in this publication and its organization and layout should go to Patricia K. Black, who was ably assisted in the editorial work by Marshall O. Donley. Thanks should also go to J. Merton England, and to Myra DeRossi, Elsie Moten, Emma Smith, Sylvia Kleinberger, and Shirley Prescott for their extreme helpfulness in preparing the materials for publication.

G.K.S.

GENERAL SESSION ADDRESSES



The Happy Crisis in Higher Education

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THE PERMANENT BUSINESS of higher education is almost always misdefined, it seems to me. Almost every approach to higher education in the United States begins by pointing to the existence of certain problems and asking whether our educational institutions can solve these problems. I don't mean to imply that we don't have problems. I certainly don't mean to imply that colleges and universities have no responsibility to solve them, if they can. But the proper function of higher education, broadly speaking, is not to solve problems; it is to create them. In any free civilization, the college or the university is not simply an instrument of the society to which it belongs; it is one of the special places where we find the meaning of that society. Higher learning is the meaning of a civilization or a considerable part of the meaning or function of the civilization. It represents a society's efforts at self-consciousness. It is an attempt to know the world around it, to know itself, and to stand back and appraise its condition and its commitments.

If higher education does its job, the society will be aware of problems otherwise unknown. More, the society will have problems, proud problems, the problems of civilized men which it would not have had if higher learning didn't exist. For insofar as institutions of learning raise questions about standards and ideals, they ask men to consider their own conscience. Insofar as universities produce new knowledge, they invite and encourage and cause a collision with traditional pieties, with old institutions. Higher learning in a society means that that society is in a permanent state of disequilibrium, and it is for that reason that higher learning has so often been suspected.

It is the barest of commonplaces that American higher education today is in a condition of crisis; but the commonplace is an ancient one, at any rate as Americans measure time. Those who have been associated with American higher education have almost always thought that our colleges and universities were in a condition of crisis, and they have been right. For higher education, which in most countries has an inherently conservative and backward-looking orientation, has had to be in the United States an instrument for regu-

lating and stabilizing an explosive movement into modernity.

Almost all our problems in higher education, past and present, have arisen out of the fact that the American—the new man, as de Crèvecoeur called him—is the exponent and apostle of modernity, and the problems that our educational systems have rehearsed and are still rehearsing are rapidly becoming today the problems of most educational systems throughout the world. The problems with which we are now concerned, the problems which we seem to think have exploded in our faces, are not in fact new problems. They are old problems simply brought to sharper focus, and they are the problems that are peculiar to a modern culture, a permanently unsettled, heterogeneous, and impious culture: The problem is that of training young men and women in highly specialized skills needed by a modern society while at the same time opening their eyes to what lies outside their specialties; the problem is that of retaining and rebuilding the essentially aristocratic tradition of liberal learning in a democratic climate; the problem is that of connecting technology to the ideals of liberal civilization; and finally, the problem is that of negotiating and mitigating the extraordinary tensions between traditional elements in our culture and the scientific elements.

Let us briefly examine each of these problems. In the first place, we have as part of our unfinished business a kind of chronic disease with which we have to live, the problem of trying to bring together specialized training and broad general education. The problem is aggravated in the United States because our educational system is, in large part, the product of a mismarriage. At the undergraduate level, most of our educational institutions were conceived and created in the Anglo-Saxon mold. At the graduate and professional level most of our educational institutions were conceived in the mold of continental education in France or Germany. Anglo-Saxon education is not, perhaps, a theory of education; it is something even deeper, an inbred habit of thought. I recall the first time that I visited Oxford. I had just left France where I was residing and where I knew a good many teachers and students at the Sorbonne. At Oxford I dropped into a bookstore and among other things bought a little guidebook. The first sentence said, "The University of Oxford exists to train character." I couldn't have imagined finding such a sentence in any book in France on French education.

Anglo-Saxon education is intended to be, as American education is intended, too, not simply a training of the mind but of that impalpable and not easy to locate entity known as character. Anglo-Saxon education had tried to do this in a special way. The differences between John Dewey and his opponents are very slim indeed when looked at against the background of other systems of education. Almost all American schools from the grade school on up have tried to provide the individual student with a special little microcosm of the adult world. They have tried to provide the student with something like a planned and total environment. In this environment, the student is expected to rehearse, to practice the skills which he will have to have as an adult. So, he must learn how to get along with the group; he must, of course, learn to read and write, go in for dramatics, journalism, regular exercise, and all the rest.

The American college is student oriented, it is a home away from home. It

is, indeed, more than a home. In its intent it is a community, a sheltered community where people will be hurt, but not hurt very badly, where they can practice most of the skills they will need later on, but not on issues that are really serious or final. So American students are tremendously interested in politics. They are by no means apathetic, but you must see them in their student governments to see their interest in politics. They are not as interested, or at any rate they are not as active, in politics on the streets of great cities as are students in Paris or Cairo. As a result, very often American students show a good deal more practical know-how about political organizations than their Continental counterparts. They know a great deal less, however, about ideology, which may or may not be a good thing.

On the other hand, however, the graduate or professional school brings a different temper and a different spirit into the university atmosphere. It exists not to train individuals as individuals, but to treat individuals as instruments for maintaining a discipline. The graduate school has the attitude of the specialist. A graduate professor looks upon his students as apprentices in his own discipline, as targets for his ideas, as aids in his research. The problem of specialization versus general education, therefore, is a peculiarly difficult problem to solve. It is difficult because we occupy houses that are divided against themselves. The spirit and temper of our universities and our colleges are, as it were, self-alienated. People look in two directions at once, and so it is extremely difficult to come up with any coherent program.

I am not at all sure that this is entirely bad. Like many chronic diseases it probably produces a state of siege, an attitude of sorts. It is a very serious and difficult problem. I think the issue is frequently misstated when it is conceived to be an issue between practical or vocational or professional training on the one side and liberal education on the other. Liberal education is not the same thing as general education. Nor for that matter is general education incompatible with a high degree of specialization in some disciplines. A liberal education is not, in fact, a specific group of subjects; it is not any definite curriculum or program of study. A liberal education is an education conducted in a certain way with a certain purpose from a certain point of view.

The heart of the matter is this. We train people liberally in a subject when at all times we try to expose the working of the human mind in that subject, when we try to show how it is an achievement of mind, when we try to expose the elements of logic, of imagination, of historical perspective, or moral meaning in any subject. To do so is an extraordinarily difficult thing to do, but one can teach chemistry liberally, and one can teach English and even philosophy vocationally, professionally, narrowly. The distinction between liberal education and specialized education is not a real distinction. The important distinction is between liberal education and purely vocational education. There are some subjects that have to be vocational and can only be that. Typewriting is an example, but there are very few subjects in college or university curricula that are vocational—doomed as it were to be vocational subjects. If there are, it is the teacher who makes them so. So in a large part the problem is not going to be solved by great, sweeping programs. It is going to be solved by getting educated, liberal teachers.

If we can take the specialized discipline, train people in it, but open the windows and the walls of that discipline so, from a given point of view, they can look out on the gardens that are adjacent, we have done what we should do, giving them a solid, civilized education in a specialty and at the same time substantial general or generalizing education.

The second great problem—another problem of unfinished education in America—has to do with the domestication of the liberal arts tradition as a tradition of liberal learning in an essentially democratic environment. This is an extraordinarily difficult thing to do for a number of reasons. The first reason I have already suggested: To teach people liberally requires that we try to fix their minds and imaginations not on what is immediately in front of them, not on some specific practical objective, but on ideas and ideals.

The second reason that we have a very difficult problem here is that the tradition of liberal education is an essentially aristocratic tradition, aristocratic by nature and aristocratic also by historical pedigree. It is aristocratic by nature simply because learning is an arduous thing. No one has really got the spirit of an education, the spirit of learning, unless he has seen the kind of self-mastery and self-discipline that any achievement in the arts and sciences requires.

At the same time, however, we live in an impatient, mobile, restless, democratic environment. I am not sorry about it, and unlike a good many of my colleagues I don't think there is an iron law which says that democracy kills liberal learning. On the contrary, I am rather aware of the fact that in many, many societies, higher education has broken down into a kind of esotericism, a kind of preciosity which is of no service to society and isn't very good higher learning either. So I rather like a society which looks upon intellectuals with a certain measure of scepticism. I live with intellectuals, and with bitter experience I know I look at them with a certain measured and sometimes unmeasured scepticism, myself included. I sometimes think it would be nice to live in a society in which it was habitual to think that a man with a title of professor was really a distinguished man, but I have seen what that habit does to the professor who enjoys it. He thinks he is very distinguished, too, and sometimes without any supporting evidence. A serving of scepticism and even a tiny soupçon of anti-intellectualism is helpful to keep intellectuals on their mettle.

Accordingly, I rather like the tension between democratic tradition and the special aristocratic tradition of liberal learning. There are, of course, very great problems here. In a democratic society higher education comes to serve very special functions. One of them is that higher education becomes the principal social escalator. The reason most young people are in schools in America is that they hope to get more money as a result, or else to have somewhat higher social positions than their parents did. I don't think that is dishonorable. I think it is not less dishonorable, or no less honorable, than the motive that brought the children of aristocracy to schools a century ago. Wanting money is as honorable as wanting to ride after the hounds. After all, the desires for money and for social position are strong desires and may help students to apply themselves. If we didn't do so much to distract them and perhaps to cushion them, perhaps they would do it. But more important, it is a remarkable evolution in the history of mankind that the major pathway to social advancement should be higher

education. That is the problem with which we are faced. I think every professor ought to rejoice, and I think it is one of the reasons we are in the midst of quite a happy crisis in higher education.

At the same time, however, the problem is a serious one. If we try to satisfy all the consumers without erecting very careful safeguards, we will be going in for a species of democratic demagoguery. Very careful safeguards have to be erected if the standards of liberal learning are to be maintained. There has always been a tendency in the United States to survey broadly, to cheapen, to turn learning into the hobby of the dilettante—the democratic dilettante, which almost is a contradiction in its term—and I think that our universities and colleges have to take severe steps to prevent this cheapening process from taking place.

Moreover, there is another issue involved here, that of shifting the perspective of traditional liberal education. No liberal education in a democratic environment can have quite the perspective it once did. In the past, the graduates of a great university went into the elite positions in the nations. They knew they were members of the elite when they entered and they knew they had a steady and secure position, if they wanted it, when they left. Moreover, they came from backgrounds which had already acquainted them with the world of learning, as such. In contrast, in a democratic environment, most of the young men and young women who go through our schools are going back to relatively modest positions in life. The women in particular are going to spend their most vigorous years largely doing manual work, and we must reflect on the fact that we are now giving collegiate education, and sometimes even graduate education, to people who are then going to go out the next twenty years and be hewers of wood and drawers of water. Now, poverty is one of the indispensable conditions in life. But we are an affluent society and it is harder for many of us to be gentlemen. How can we give a kind of education which will cling and will stick? How can we give a kind of education that will change the perspective of young people when they get it and give them one which will stay with them after they have left?

The problem is a problem of seduction. It is not a problem of fitting their motives, but of using the motives they have and luring them into an appreciation of the broader world of learning.

A third issue is the great problem of maintaining the traditions of higher education in a society that is in love with technology. We have all sorts of contradictory images of ourselves these days; we Americans that don't fuse at all. They tell us we are undisciplined and conformists, sodden with materialism and aching for a cause, and all the rest. The images don't fuse. In particular, we tell ourselves that we are materialists and we point to our booming technology as one of the illustrations or proofs of this point. But, American technology is in its own way not a proof of materialism or even a love of gadgetry. It provides a curiously moral, esthetic, and almost religious sense of proportion to our society and to our institutions of higher learning. In order to provide that civilizing sense of proportion, however, technologists have to be able to keep first things first, to know what their main business is. I don't mean to suggest that specialized research, in space, for example, is not worth doing. It is worth

doing in the interest of national defense; it is worth doing in the interest of science. But the most important reason for wanting to do such research is that it contributes to the long-range purposes of science.

This brings us to the final great problem. In the United States, the greatest danger to our conception of the intellectual life comes from our preoccupation with technology. As a result of that preoccupation, we have absorbed the image of science and the image of technology. Until recently, and perhaps even today, most Americans confuse Thomas Edison with a scientist. He was an inventor, but only a scientist of sorts. Science is not organized gadgetry; it exists to provide knowledge for its own sake, to give us some understanding of the order of things insofar as given to us to understand that order.

From this point of view, we come to a fundamentally difficult problem, perhaps not acute in America, but a problem in Western civilization. The college or university that carries on its activity in a climate of freedom is not just an instrument of a free civilization; it is one of the special places where we find the meaning of that civilization. So it is perhaps natural that the deepest intellectual and moral division in our civilization is felt with peculiar intensity on our college and university campuses. I refer to the conflict between means and ends, techniques and values, or science and the humanities. The mere form in which this issue is stated is a reflection of that conflict, a reinforcement of it, and, I think, the expression of a dangerous and exhausting illusion.

The argument, properly construed, is not between those who are engaged in expanding human powers on one side and those on the other who are guardians of the heritage of the human spirit. Science is part of that heritage—an unwelcome part, because it overthrows a good many other parts of the heritage. It is perfectly true that science gives no authoritative or final answer to questions about human values, but then do the humanities? Despite the differences between science and the humanities, both are, or ought to be, examples of disciplined intelligence, of refined analysis, of sober respect for evidence, of taste in the selection of problems, and in the organization of them. The real argument is not between subjects. It is between two rather different conceptions of what is the meaning of evidence, what is the nature of intelligence. The source of that argument is the challenge which the scientific style and spirit have presented to those who have traditionally occupied special positions of authority as arbiters of cultural, moral, and social knowledge. The scientific philosopher makes life hard for the metaphysician; the sociologist breaks into the conversation of the teacher of literature and asks for evidence to support the producer of literature's association with our culture.

But the main issue is the question of the nature of intellectual authority, the kind of answer which a society is going to regard as a good answer. The problem that science creates for all of us is a very complicated one. It has two essential features which illustrate its discomfort. The first is that science almost never answers the question the ordinary man and the humanities want answered. So science seemingly is an evasion. But it isn't; it is a triumph over ignorant questions. It is a reformulation of the question. There are some questions, indeed most questions, of common sense which we can't answer, and we can't answer them because they are foolish questions. That hurts, and that is part of the problem.

The second part of the problem is that science almost never gives us an answer that really says something definitely because it doesn't say yes or no. It says "yes, but," or "no, in this respect . . ." It is really a complicated problem, and it is a dozen problems, and we will have to go after them one by one. We stand by while science is subordinated to the humanities. Science doesn't answer the mystery of life—it has told a lot more about that mystery than it told us 100 years before, but it hasn't solved the mystery. It has insulted our traditional culture in a sense. It wouldn't pay attention to *the* mystery but would look into the mysteries. This is the abominable snowman which Sir Charles Snow has called the conflict between the two cultures. I have considerable sympathy with the view he expressed. Although I am a professor in what conventionally is thought to be one of the new mystic disciplines, I have noted that on the whole my colleagues in the department of literature regard themselves as highly educated men because they read novels and regard scientists as illiterate because they only read books in physics. Whereas, I have noticed that most scientists actually read novels, and they know a good deal beyond the discipline which the average professor of literature thinks is a civilized learning discipline. There is a conflict between two cultures. However, unlike Sir Charles, I don't think that our ability to win the cold war, or even to give aid to underdeveloped nations, depends on our ability to solve this problem. That would be a depressing view of our situation. I think it is unjustified. I don't think the arguments between the scientists and the humanists are going to die in our time. I don't know when, if ever, they are going to die. I rather suspect they will die when men conquer the tendency to go in for wishful thinking and quick answers. Until that happens, I think the conflict will remain.

As long as the argument remains in its present form, however, there is one thing we probably won't do very well. We won't do liberal education very well. We won't do university education very well. As long as the discussion continues to be surrounded by eagerness for the easy, sweeping answer, by arrogance and by a kind of stubborn ignorance, there is very little likelihood that we are going to get very far in dealing with the fundamental issue in liberal education. At the very least, a substantive education in one of the sciences is a prerequisite for any educated man in our society. To give him less than that is to shut the door to his appreciation of some of the most majestic achievements of our culture. In the Middle Ages, things were there for everyone to see. Most people who had experience putting one stone on top of another could understand the kind of achievement the cathedral represented. They couldn't do it, they didn't know how the architect conceived it. But they understood it was quite a glorious achievement. That elementary kind of appreciation is denied to the great majority of educated men in our civilization. The sciences are not more important than the other disciplines, but substantive education in the sciences, education for its own sake in the sciences, is a very high priority matter in the coming decade. And, education ought to begin where most education should begin—with the education of the college and university faculties.

The trouble with the scientists is that life has been so good to them recently that they are no longer interested in teaching. They get better paying jobs, or they can do something else and look as though they are teaching. Scientists have a habit, like other professional groups, of saying they aren't popular. The self-

image of professors in America is lower than the image that the outside world has. Sociologists show that the professor is one of the most highly respected people in America. It is the professors who think they are not. We mustn't worry about that, because doctors have a deplorable image of themselves, and lawyers. The members of every group think we don't like them. We are a very self-conscious society. So, scientists complain they are looked upon with suspicion, and, in view of the loud bang some of them are responsible for making, I suppose they are looked upon with mixed feelings. I look upon them too with mixed feelings. They have a major job of education to do. The great imaginative task in the coming decade is that task of liberal education for the laymen in the sciences. Unless a good many scientists make this a major part of their professional commitment, the job is unlikely to be done very well.

Now, let us look briefly at two new issues which I think have not been located or perhaps quite properly defined. A modernist in a society like ours is always in danger of becoming a kind of split personality. This is particularly true when his work becomes more highly specialized in its demands and when on the other side the habit of consuming goes up and up. What is that split personality? On one side, our work sinks into routine. On the other side, our play, our leisure, or what we choose to call our "culture" becomes increasingly disorganized and frivolous. But the sharp division between work and play, machinery and culture, science and the humanities, is itself a sign of man's age-old battle with scarcity—a hangover from that battle. In a society as wealthy as ours, such divisions are increasingly anachronistic. The problem is to unite discipline and spontaneity, usefulness and culture, work and play.

One of the fundamental problems waged by every society moving toward modernity has been the struggle against illiteracy. The colleges and universities of the United States have in the past been part of that struggle. In the coming decade I think they are going to wage a battle against a new kind of illiteracy—creeping illiteracy of adult human beings in a world in which they have been turned loose with more leisure than before, illiteracy about the uses of leisure or the meaning of leisure. To call the process in which our colleges and universities engage adult education is a misnomer, for education suggests preparation for something and I am not thinking of preparation. I am thinking of an invitation, as it were, to a consuming and concentrated task. Our society is rich enough and, in terms of its best and most traditional culture, it ought to offer its members a challenge for the kind of play that is the best kind, the kind that is like work or at any rate the best work, disciplined, cumulative, with a chance to perform and to achieve. The colleges and universities are the agencies to perform this task, and they are in the years to come going to have to change themselves over increasingly. Instead of being merely an exclusive training ground for the young, instead of going in for adult education as a form of advertising or an easy form for raising money, they are going to have to take it for granted that they are in America, and have been what the medieval church was in its day—a great shelter for human culture and human achievement.

The process for transforming the lost week ends and lost leisure hours of Americans into something that will help them to demonstrate and find themselves is a process to which I should like to see our colleges and universities commit themselves.

The second new issue is this: The democratic process depends on the state of communication, but communications in our society are warped by the pressures of the market place, burdened by the difficulties of the matters to be communicated, and inherently complicated by the fact that today just to report the news is to make news. An event is not simply what happens, it is what is reported. That plays back on the event, expanding its area and transmuting it into something other than it would have been if it were allowed to play out its career in private. I do not mean to say that the newspapers create events or make them important. I mean to say only that in an open society, in a society in which people want news, the fact that they get the news expands the area of conflict. It is, therefore, terribly important that those who get brought into the conflict by way of communications be reasonably well prepared to understand what is going on. That, of course, is terribly difficult, but it is particularly difficult in a society in which most of our news services, most of our public affairs services, are geared to the moment, the shock, the sensational. Bad news, from a journalist's point of view, is good news; good news is no news. And long-range news is a bore. One cannot understand the nature of the world he inhabits so long as information comes to him in that form and only in that form every day.

I don't know quite how to produce a revolution in this area, but I do think that once again a society as diversified, as plural, as ours ought to be able to provide those citizens who care with other media of communication—media of information that offer an alternative, a standard, a way of judging what they are getting as daily fare. Once again, the colleges and universities have an extraordinary opportunity and responsibility in this area—in radio, in television, in magazines, and in communicating with a large and eager general audience. I don't know whether they can do this individually or regionally or through an association like the Association for Higher Education, but there is a long-range job to be done if the level of communications in the United States is to be raised and once more it looks to me as if the obvious candidate for the job is the higher educational system.

We do, then, have a burdensome, difficult set of issues to deal with, but they are old issues. It is fortunate, it is a happy crisis when we are aware, as we are now aware, that we have these problems. It is also fortunate that, for the first time in the history of American higher education, a very large and broad public is looking upon all of us with considerable curiosity and interest. If we do badly, we will hear about it.

The Role of Science in Peace and War: Implications for Higher Education

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IT WAS ON THE CAMPUS of The University of Chicago less than nineteen years ago on December 2, 1942, that man achieved the first self-sustaining nuclear reaction. At that time a message was sent from Chicago to Washington, "The Italian navigator has landed in the new world." The Italian navigator was Enrico Fermi.

We are living in that new world. The extent to which we can examine the realities of that world, the extent to which we can train ourselves and our students to participate in that world will determine whether or not we survive as individuals and as a growing part of the future.

This new world in which we now live is a world in which hydrogen bombs are stockpiled in large numbers, in which nuclear reactors are driving large electric power plants, a world in which radioactive isotopes are in use in medicine, industry, and agriculture. It is a world in which research activity in various fields is giving us a totally different depth of understanding of a wide range of phenomena. It is a world in which it has become necessary both for individuals and for society to behave in uniquely different ways, for they must understand the nature and consequences of these phenomena and they must transcend their personal experience and, in a sense, transcend the history of man. It has become necessary for society to do this. It does not mean that society will. It is this gap which engulfs us, which swallows up what it has taken thousands of years to bring into existence.

People have always thought of their particular time in human history as unique, and therefore we should go beyond our subjective experience, if we are to appraise our own time accurately, to determine to what extent our situation is different from what has gone before.

We can point out, for example, that the amount of energy which is concentrated in fuels and explosives available to man has not changed throughout past human history. If you take a teaspoonful of the modern jet fuel, the

amount of water you can boil from the heat produced by burning this material would be enough to boil about two tablespoons. What has changed in the course of thousands of years is the speed with which it can be burned and the amount of ash, and its suitability for use in various kinds of engines, but not the amount of material per unit weight. The fissioning of one teaspoonful of uranium released enough energy to boil a million gallons of water. It is this sudden and abrupt change which poses a problem for human beings. In the explosion which took place at Hiroshima, the volume of uranium that entered into that reactor would fill about three tablespoons. The existing stockpiles of weapons contain many times the energy required to totally vaporize every human being on earth, yet the volume of fissionable material in stockpiles is less than a cube fifty feet on an edge.

We are not accustomed to this concentration of energy available to human beings. Whether we can appreciate what this means, whether we can adapt our thoughts and our institutions in time to live in this new world where the Italian navigator landed less than twenty years ago is the problem with which we are faced. It is necessary, I think, in talking about this new world, to realize that it has its quite different aspects. There are problems associated with weapons and man's ability to produce mass quantities of these weapons. There are problems associated with the technology of supplying the materials necessary for human existence. There are problems associated with man's understanding and appreciation of this growth, and the role science itself plays in the development of human society.

Concerning the first of these, the properties of such weapons, perhaps I can give you some idea of the problem with some specifics—some of the characteristics of the weapons and the consequences of nuclear war.

Fifty per cent of the energy of a large hydrogen bomb is used in producing the blast effects. In an analysis of a limited attack on the United States, the Holifield Committee, a subcommittee of the Joint Committee on Atomic Energy, estimated that the blast damage from 263 hydrogen bombs—a limited attack representing only a fraction of existing stockpiles—would totally destroy twelve million homes and damage ten million more. The deaths from this attack would be fifty million human beings, based upon current population figures. I want to point out that the total number of wounded and killed, counting all wars in United States history, was about five per cent of this—the number which would be killed within the first couple of weeks of a limited nuclear attack, according to these estimates.

I have been describing where fifty per cent of the energy of a large hydrogen bomb blast goes; another thirty-five per cent of the large bomb goes into the production of heat and light. Harrison Brown has observed in his pamphlet, *The Community of Fear,* that in the absence of clouds, 610 megaton bombs, by their heat and light effect, would scorch the entire surface of the United States, if each exploded at an altitude of thirty miles above the surface of the earth. Just the searing heat and light which comes from an explosion of a large bomb would sear the earth's surface, killing animals and humans and destroying all other living creatures.

Fifteen per cent of the energy of an H-bomb goes into radioactivity. At Bikini Atoll in March 1954, 7000 square miles were covered with lethal amounts of radioactivity. We can ask a simple question: How many such zones of 7000 square miles in area would be required to cover the entire land surface of this earth—not only the surface used by human beings for their cities or farms, but everything above sea level, including the deserts? The answer is about 8000—8000 such zones, each 7000 square miles in size, would make the entire land surface of this earth unfit to live on.

Now the estimate of the cost of these weapons is a little over $1 million apiece. This means that the cost of weapons that would be required to make the entire land surface of this earth unfit for human beings to live in, is about one-fifth of what is spent each year by this country alone in military preparation.

Not only are the characteristics of individual weapons quite different from those with which people have had previous experience, but the means of delivering are quite different. This destruction comes in small packages. A single bomber can carry several hydrogen bombs. A fighter plane can carry a nuclear weapon large enough to destroy a large metropolitan area. They can carry the relatively small weights required to produce destruction which in the past required large armies, large fleets of airplanes, other facilities, where there was some possibility of interception and tangible protection.

This awareness must grow—awareness of the fact that one does not have tangible protection, one no longer has a shield; instead, one is dependent upon other human beings and upon the proper operation of their communications network, upon the ability to keep local wars from spreading into large conflicts, and a whole host of other factors. Only when we recognize the fact that one has no tangible protection can we begin to cope seriously with the problems that exist, can we begin to train ourselves and the people around us to understand what is involved.

Now, what alternatives do we face? What alternatives can we choose which have some hope of bringing us into a better situation? Alternatives may involve serious risks, but only through a willingness to take serious risks is there any possibility that we may move toward the future. We might point to various aspects of the situation other than simply the characteristics of individual weapons, and the ease with which these weapons can be delivered. We might point to the over-all kind of aftermath which can be produced by modern military forces.

Civil defense measures which concern themselves with providing fallout protection for a couple of weeks for those populations that are out of the urban areas do not cope with the magnitude of the problem we face. Again, referring back to the Holifield Committee report on the effects of a limited nuclear attack, what are some of the kinds of phenomena which can occur in addition to the blast effect, to the heat and fire produced by the bombs themselves, and the local radioactivity? First of all, conventional sources of food and water would be generally inaccessible and unusable. Commissioner Libby, former AEC commissioner, points out that farm land which had been in these fallout patterns might not be usable for several decades. Then there is the problem of disease and plagues resulting from unburied bodies in the huge numbers lying

around the surface of the country, the breakdown of the water and sewage systems, the destruction of hospitals, the inability to stop epidemics, the problem of the gross change of ecology. When large forest regions are burned down, the balance between vegetation and animals undergoes a change—between plants, insects, and birds of various kinds.

Furthermore, there is the social and psychological disintegration resulting from the knowledge that members of one's family, one's associates, the people one has lived with in past life, have been subjected to horrible deaths in various parts of the country—a disintegration of the whole range of factors which tend to contribute to our normal social behavior.

Then there is the economic and political disruption produced by the destruction of the centers of society. It is a destruction of the interconnection among the parts of society. For example, if you take a house that is composed of many bricks, even if you only destroy half of the bricks of the house, it doesn't mean you have a half house left, if the remaining half is broken apart. The same obtains in society. Even if only half of the population were destroyed, this does not mean that what is left could function at all. The reactions under these situations are extremely difficult to predict, but the attempt to understand the nature of these reactions, to cope with them, to look for realistic alternatives is a major part of the problem we face.

In *Coronet Magazine*, September 1960, Governor Meyner of New Jersey pointed out that many people are trying "to resolve the most urgent problems of the 1960s with the solutions borrowed from the 1940s; but there is only one solution—peace." General MacArthur made a statement in San Francisco five years ago, "We may all be practically annihilated, but war has ceased to be an arbiter of survival." Eighteen Nobel Prize winners met in July 1955 and adopted a statement in which they said, "All nations must bring themselves to the decision by which they voluntarily renounce force as the last recourse in foreign policy. They will cease to exist if they are not prepared to do this."

The difficulty comes in the recognition that nuclear war does not represent an adequate means of trying to accomplish our means. It does not represent a means of trying to achieve stability over a period of time. Then begins the search in earnest of the alternatives. You can't sit down in a few minutes and give a clear-cut answer. Yet, because the problem is difficult, you don't hide from it; you don't try to hide something that threatens your life and children, that threatens your values; you don't shunt the future aside on the wish that maybe someone else is taking care of us.

The problem is, how do we examine these problems with some perspicacity? How can we examine the nature of the world in which we live? One way is to overcome some prevalent illusions. Oftentimes people feel that because nuclear war is so horrible this represents our best protection, because under these circumstances nobody would initiate nuclear war.

On October 5, 1960, there was an alert by the Strategic Air Command around the world resulting from the fact that a radar reflection had taken place off the surface of the moon. Thomas Watson and Charles Percy, two industrialists who were visiting the Strategic Air Command headquarters in Colorado, commented on it later. Interestingly enough, their comments were published in the

Manchester Guardian and not here. They said that there had been a hopeless feeling that this was the beginning of World War III as the preparations were underway responding to these radar reflections, which turned out to be reflections from the moon. Missiles have gone astray, which have not responded to the signals to destroy them and have crashed in the Brazilian jungles, in Louisiana, and pieces of missiles have fallen into Cuba. These things have already happened. How long can one continue to take chances and expect this to be a stable situation? Our choice is not between war and surrender, for modern war is surrender to death and destruction of all we value. The problems are not simple. We must look for possible ways of creating a situation which has greater long-term stability.

Here, too, nuclear science has an essential role to play. For the first time, with modern technology, it is possible to have a world society in which the bulk of the society can contribute to human culture. In the liberalism of the eighteenth and nineteenth centuries, it was common for people to talk about the rights of all men, about the dignity of all men. Those words sounded good. But then, it was not feasible to have a world population in which there was enough food, enough knowledge to cure basic diseases of not only humans, but of crop and livestock, in order to have opportunities for the world population. Existing technology is adequate, if it were applied, for the existing world population. Harrison Brown, in his *The Next 100 Years* and also in *The Challenge of Man's Future,* points out some of the ways in which existing technology can be used not only for the population now but for a considerably extended size as well.

We must become aware of the completeness of our interdependence with the rest of the world; of the extent our literature, our science, and other accomplishments are all the results of contributions from human beings in many parts of the world over generations; and of the extent that we depend upon the rest of the world for raw materials, for ideas, both human and material resources. Our futures are closely interlocked.

The problem of educating human beings to give them an education which does not fail to make people aware of the world-wide nature of our culture—the fact that it has not been the result of a small number of people working for short periods of time but has been a cumulative achievement—is one of the necessary parts of building peace. The scientific community has a long tradition in building this awareness. It is not new to have joint scientific projects on a world-wide scale to understand the characteristics of this world and try to solve some of its problems. Recent examples of this long tradition are the work of the IAEA in atomic energy, the activities in WHO, and UNESCO, and the programs during IGY. These are examples of some of the activities in which the scientific community has played a paramount role, trying to build a common basis for a stable world community.

Not only does existing technology give man the means for a stable society, but nuclear weapons have made it imperative that he solve these problems quickly. Yet humans have needs which go beyond protection from immediate death, being fed enough food, and having a warm place to live. Clearly science is not the sole answer to all of the problems which face human beings, but science has an important contribution beyond simply supplying the technology either for death or for existence.

Compared to the variety of the structures of this world, we are to a large extent blind. We can with our unaided senses, comprehend only a small range of objects with a size of one-tenth of a millimeter, to perhaps a few hundred kilometers. This is the range of the phenomena that we can have direct experience with. Even over this range, we are limited in the kind of events with which we can be aware. Science can make us more aware in a more profound way of what goes on in the world. It not only makes us aware of these events, but puts them together in a unified structure.

There was a conference in which the Organization for European Economic Cooperation, concerning itself with physics, adopted this statement: "In the present context, it cannot be too strongly emphasized that science is one of the humanities. Physics is not a collection of 'facts' which can be learned; it is a highly imaginative intellectual structure of concepts that gives a meaningful and creative picture or model of such of man's experience of the world in which he lives as it has yet been possible to integrate into a consistent whole. It is a picture that is constantly being given further detail and some parts of which are occasionally being redrawn."

The problem is, how do we make use of the potentialities of science, not only for keeping us well fed and warm, not only for various material changes in our existence, but for building a life which has quality to it? In order to do this we have to begin to realize that exchange of words can be valuable in a context, but people must be made aware that the process of merely writing ink marks on a sheet of paper or getting people to respond so they make marks on a sheet of paper does not represent an effective way of coping with the situation. One of the things that science has learned is that when one is trying to explore new realities it becomes increasingly important not to become so attached to the words that one loses the ability to see realities. In order to do this, it requires consistent contact with events, it requires participation. This is one way to cut through the verbiage which otherwise clutters much of our thinking. It requires not only the ability to examine specific events, it requires the ability to build some matrix of ideas in which these events can fit together. The problem of obtaining information in the face of conflicting sources is one of the skills which it is crucial to develop in human beings. If they learn only to take a narrow channel of communication which they are led to believe is totally reliable, and simply receive information along this narrow channel without developing the ability to critically examine it, or compare it with other channels of information, then they are unlikely to participate in the world in which we now live.

It is also important to realize that a growing number of tasks can be done by automatic machinery. To prepare human beings to be poor substitutes for electronic computers does not represent an adequate way of facing the modern world. The electronic computer is much more adept than the human at storing a great amount of information, having access to much of this information, and manipulating this information in highly predictable ways. People should become aware of the fact that their potentials are distinctive and their development not only gives depth and continuity to their own lives, but is one of the necessities of trying to live in this new world.

It was a little less than 100 years ago that Abraham Lincoln asked "whether this nation, or any nation, so conceived and so dedicated, could long endure."

This nation was conceived in a revolution. It was dedicated not only to the proposition that all men are created equal, but also that an informed citizenry was capable of comprehending the major issues of the day, and that it had the right to participate, to influence, and, if necessary, to modify the society and the government in order to grow in the modern world. Because of this tradition, we are uniquely suited to the kind of rapidly changing world in which we now live. If we can treat these concepts as more than pleasant sounding words, if we can try to develop individuals who consistently examine critically the ideas that are required, we can make the new world a better one to live in. It is not a simple process, and people who are inculcated with the desire to achieve for themselves a transient sequence of personal pleasures are not likely to be able to participate in this new world. If one is interested in this, then various forms of chemical and psychological dope can serve this function better than education. If one is interested in more than this, if one is interested in a life which has some relevance to the future, then we must realize the problems as well as the potentials of modern technology and science to appreciate the scope and the unity of the universe in which we live. These are some of the problems which modern education must face.

The Role of Science in U.S. Policy: Implications for Higher Education

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THE PAST FIFTEEN YEARS have been years in which arms control or disarmament have been a deception as far as politics and public policy have been concerned in the United States. The deception amounts to this: The United States, both in the Democratic and Republican administrations, has been continually praising the concept of arms control and continually acting behind the scenes to sabotage any agreement with the Russians on this question. To say this I think is not to take one position or another; it simply is the fact. One reason for this fact is entirely understandable. It was Mr. John Foster Dulles' approach. He was the one who presided over the test of strength with the Russians when World War II came to a close. Mr. Dulles didn't want arms control or disarmament. His position was that this was not the time, and that our overriding task was to face Russia and show them they could not put one foot further ahead each time and gradually reduce us to a position of impotency. He made the usual public statements in favor of arms control, because public opinion seemed to require it, and then saw to it that the Russians understood we were not really negotiating seriously.

The other reason which lies behind this deception is what happened in the White House, where one relatively small group of people, headed by Admiral Lewis Strauss, had a virtual monoply of access to President Eisenhower. On this point, President Eisenhower himself was very much interested in arms control or the check of nuclear arms race, but he got his scientific information through a very narrow and restricted group. This happened because of Mr. Eisenhower's proclivity to pick a particular individual as an adviser and lean on that individual. Once again I am not trying to decide the debate between the two. I am just trying to say that that monopoly of scientific information on arms control questions through the Atomic Energy Commission, through Admiral Strauss and his chief adviser, Edward Teller, was such that the President really had no alternative in the way of information and point of view. It is the fact

of this monopoly and some of its characteristics that interest me. I think that the men who presented the scientific judgment and information to the President through this highly restricted channel were men who gave what turned out in the end to be biased, politically biased, or politically slanted, and often second-rate scientific advice on the possibilities of disarmament.

These men, politically speaking, had what they would call a conviction and what their opponents would call an obsession which was parallel to that of Foster Dulles, only more intense. It was the feeling that if we ever negotiated with the Russians we would be lost, because the Russians would always be able to cheat and to defeat the object of any negotiations. As a result, then, they believed that negotiations or agreement in the area of arms control would be damaging to the national security of the United States. They also had an overwhelming sense that the United States must keep well ahead of the Russians in the field of those great nuclear weapons which were the ultimate deterrent.

Coupled to this monopoly of information to the Presidency were a few other things which also ought to be mentioned. One was the fact that this took place under secrecy. Secrecy has its uses, also it has abuses. The abuse is when one is able to whitewash mistakes or cover up his inadequacies or overwhelm or silence his opponents. That last is, of course, what happened. The majority of scientists were inhibited in what they could say because information on this issue was classified. They were not able to talk in public, while Mr. Teller was given leave by Admiral Strauss to make public speeches whenever he wished on the basis of the classified information he possessed. As a result, opponents were virtually unable to bring their point of view to the President or, indeed, to the public with anything like the volume that was called for.

I have some information which has me convinced that both Eisenhower and Dulles were virtually prisoners in this respect at the top of the pyramid of power in this country. I am not saying this critically, but stating it as one of the facts with which we had to cope. As a result, they had no alternative policy or set of scientific facts and information and judgment against which they could weigh their information.

What happened was that the negotiations with the Russians were deliberately, and for specific purposes, sabotaged. This was done in the way in which diplomats let other diplomats know what they want. You make proposals which are not intended to be taken seriously. Then you do not moderate them in discussion and that settles it. This produced a situation where we had no idea, and we have no idea today, whether the Russians would have or will respond to serious negotiations. All we can say is that serious negotiation has not been undertaken. Therefore, we are not in a position to know.

Then came the turning point. It was fortuitous, which is not very much to our credit. It was not planned. What happened? Sputnik went up. Something had to be done about the situation and Mr. Eisenhower looked around for the best men to bring into the White House. He picked President Killian of MIT and gave him authority to bring the best scientists he could find into the White House as advisers to himself and to the President. At this point, the majority of scientists for the first time had a chance to have access to both Mr. Dulles and the President, and the monopoly was broken.

The new men thought this problem was of sufficiently overriding propor-

tions so that something had to be done about it. They were crusaders in the sense of applying their scientific knowledge to the existing world situation. Some were dubious about going too fast in this direction, but the new men in the White House were essentially an open-minded group as scientists generally are, and they discussed the issue without the strong conviction or obsession dominating the advice reaching the President up to that point.

The first thing the new group did was to reverse the basic verdict given to the President by Admiral Strauss and Mr. Teller. They said, first, that no long-continued and substantial United States lead in nuclear weaponry was possible, although Mr. Strauss and Mr. Teller argued that it was possible and should be maintained. They said it would be to the advantage of the United States to have a safeguarded agreement on arms control, and not to the disadvantage of the security of the United States as Messrs. Teller and Strauss had argued.

For the first time, the President and Mr. Dulles were receiving first-rate scientific information from a sufficiently wide spectrum of judgment and opinion so that it was possible to come to different conclusions. What happened was that the policy of the United States with respect to arms control turned sharply 180 degrees and, in effect, although this is something of an oversimplification, started off in the opposite direction within a matter of months after Mr. Killian and his colleagues were in the White House. The older group of advisers were simply outclassed by the new group that came in, and many concepts which simply would not stand up under the light of open-minded inquiry and authoritative judgment were replaced. Mr. Dulles was still not convinced that we should have agreement with the Russians. But he realized that this was a formidable new element of intelligence and power in the complex of forces over which he had to preside, and he bowed a bit in that direction, although to the end people who were close to him say he was never really convinced or showed signs of being really convinced that arms control could be a good thing.

It looks at first glance as if the scientists saved us from a very great folly, and I believe this is so. They saved us from the folly of never really making an effort to find out whether a safeguarded agreement with the Russians in the field of arms control was or was not possible. Let's go back for a moment to examine why a group of scientists should be the ones to rescue us. It has something to do with the training of scientists.

World War II taught us that you can train people to be admirable technicians, and they can turn out to be admirable Nazis. There was something very wrong with that picture. The Massachusetts Institute of Technology therefore came to the conclusion that a man cannot be a great scientist unless he is also a great humanist. There is now a new tendency to add to this another factor and to say that a good scientist not only needs to be a good humanist, but also needs to have good qualities of imagination and creativity which fundamentally are the qualities of the artist. This is a far spread from the early concept of technical education with which most of us were brought up. MIT is moving very far out in these directions and has drastically changed its curriculum in order to take account of these basic conclusions. I think it is probably fair to say that it was this background which helped provide the kind of men, the kind of scientists, who were so wide angled in their mental and moral vision that they were able to go into the White House with Mr. Killian and to meet a situation like

this, and cope with it in a way which was consistent both with science and with statesmanship.

One might add a word about some of the qualities which the scientist has brought to the field of public affairs. Scientists love change, which many citizens resist. Science has a way of reaching out to the future, while laymen often fight the tendency and hang back. Scientists must be honest with themselves and with others. One cannot be a scientist and cheat. Science is basically constructive and optimistic; it has progressively solved problems. By and large, it believes that unless some violation of a fundamental law of nature is concerned, most problems ultimately can be solved. As a result, it has a willingness to go ahead and tackle a problem irrespective of the obstacles which may seem to be in the way.

Scientists know how bad the danger is from an unrestricted nuclear arms race. I think that scientists are somewhat better able than the rest of us to measure the risks of going ahead versus not going ahead with an arms control effort. This is one of the most subtle and yet extremely important aspects of the public policy on this issue.

I think that scientists work well in groups and, on the whole, tend to reject an emotional approach to a problem and try to be as detached as possible in working with it.

The popular verdict on the role of science in modern society is to say that scientists and civilians must move toward each other. This is obviously happening. Most educators know about the efforts which are now being made in various parts of the educational curriculum to give the citizen a basic awareness of science and of how science operates and how scientists think, which they need as citizens in order to cope with the various problems raised by the era of science. The work of the Physical Science Study Committee in this respect is most remarkable and praiseworthy. I asked its chief sponsor, Jerrold Zacharias, whether it was possible to train citizens to learn more about science by the new courses which the committee has developed, as well as to train young scientists more speedily and effectively. He said their experience was that the new courses worked just as well on citizens as on technicians. This is good. Yet I would tend to question the rather glib conclusion that the chief thing to do is to have the scientist move out more into cultural and public affairs and the citizen move toward greater knowledge of the sciences, important as both of these trends are.

We have to go one step further. Science is an adviser but science is not a policy maker. Science is a servant of public policy but it probably should not become a master. Science is one method of arriving at a conclusion in the world of public affairs.

The paramount need is to train policy makers and the citizens to support them who are capable of resolving the problems which science brings to government to be solved.

Most of the very great problems in foreign policy today involve more subtle thinking and an intellectual capacity to get deeper into a problem than we as citizens have yet been willing to put forth. There are innumerable illustrations of this.

Take the question of the over-all policy of containment and deterrent—

the effort to stand up to the Russians and show them we will not allow them to do what we allowed Hitler to do. Could we keep up this over-all pressure, and yet at the same time take particular areas of pressure, such as the nuclear arms race where the tension might let go and blow us all up, and deliberately relieve the local pressure in those areas? Why should we think our only alternatives are to stiffen or relax the pressure, when with a little subtlety we could do both at the same time at different points on the battleground of the Cold War? This is the kind of problem that we have to think more about. Another is the problem of working with neutralism. Our first instinct is to say we cannot safely do so. Why not?

Or we have a mixed military and political foreign policy and we have always allowed the military to have an overriding priority when there was a conflict. Can't we change the mix? In arms control, is negotiation with the Russians consistent or not consistent with the kind of firmness which we have chosen as our policy toward communism?

We must, of course, do everything that we can to bring the two cultures—the scientific and the political—into closer communication. But beyond that, we should also put every possible effort into training policy makers and training citizens who can resolve the problems which science raises and presents us with. This is a task which transcends science and is fundamentally a task of humanism. It involves the question of what kind of world we really want. Is it a world dominated by the products of science and the more primitive instincts in people, or that flowering of the human spirit which science now makes possible? We need an overriding sense of compassion and of national mission to help people all over the world to fulfill themselves and their possibilities.

These are words which we toss back and forth to each other and they almost have become clichés. But they are in fact axioms, and I believe they are the end result of an analysis of the role of science in society. The role of science, I would suggest, is probably derivative. It should serve; not dominate. To pick up a phrase of Edwin Land, speaking at the Academy of Arts and Sciences, "The dichotomy is not between the two cultures, between science and humanist, it is actually between culture and anticulture."

Are Fundamental Changes Required in Higher Education?

BYRON K. TRIPPET

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TO THE QUESTION "Are Fundamental Changes Required in Higher Education?" my answer is "no."

Instead of saying "no" flatly, perhaps I should begin by saying, "Well, it depends." It depends on what is meant by "fundamental." It depends on how inclusively the term "education" is to be used. If the question contemplates revolutionizing the aims of education as well as its means, the answer for me remains "no." If the question relates primarily to the practical problems which bear on the ability of the system of higher education to be effective—such matters as increasing numbers of students, relatively fewer teachers, increasing bodies of knowledge, more external influences, physical resources to support the learning process, financial rewards for those who teach, and so on and so on—the answer is a qualified "yes."

The practical problems which confront American higher education are numerous, difficult, and pervasive. They merit critical analysis and concerted effort for solutions, and they are certainly getting it. Already we have witnessed a remarkable number of changes, which might be considered fundamental, having to do with these practical problems. I have in mind such things as enlarged financial support for higher education from new sources, new patterns of institutional organization, cooperative ventures of all kinds by groups of colleges, better utilization of space and teaching resources, and the application of mechanical and technological instruments for instruction. When one thinks back twenty years, or even ten years, it becomes obvious that American higher education has already undertaken far-reaching experiments, fundamental in character, to solve the practical problems with considerable success. Nor are we at the end of the process. There will continue to be an abundant need for further experimentation and I, for one, am fairly optimistic about our prospects. But the process of analyzing our practical problems inevitably extends to reconsideration of educational aims and this, of course, is good, too, within limits. It is a process, however,

which can grow at the rate of geometric progression until it becomes almost an end in itself with occasional dubious, *non sequitur* consequences for the cause of higher education.

For one thing, it subtly contributes to a state of mind which exaggerates the possibilities of education. It leads to claims and expectations for education which are unrealistic and even dishonest. As I listen to and read the numerous recommendations for overhauling the American system of education, education at all levels, I have the uneasy feeling that I am listening to competing gospels for salvation. It is education, if properly overhauled, which will save America and indeed the world from its many ills. Formal education is to repair the shortcomings of family instruction. It is to supplement, if not replace, the educative impact of religion and the church. It is to produce a breed of citizens who at the age of twenty-two or twenty-three will be equipped to bring about miraculous improvements in democratic action. It is to reduce international tension through peace corps to the Congolese, the Vietnamese, or wherever the newest crisis appears and thus pave the way for lasting, international peace. It is to provide the nation with its trained manpower needs. It is to reflect and to influence national purpose. It is, as Theodore Brameld said in *Education for the Emerging Age*, "To reconstruct a culture which if left unreconstructed will surely collapse of its own frustrations and conflicts."

Perhaps I am merely confessing the limitations of my vision and imagination by saying I simply do not believe this kind of expectation or the presuppositions on which it rests are true. Moreover, I think we may be sowing dragons' teeth if we imply that it is. We are committing in education the same kind of error economic reformers of the nineteenth and early twentieth century committed when they reasoned that if only the right economic system could be instituted, the economic problem would be solved and with its solution would come the solution of all major human problems. If the history of the last fifty years has demonstrated anything, it has demonstrated the emptiness of this kind of appeal and reasoning for the future.

Already American colleges and universities, my own included, are promising their customers (students, parents, and society) more than they can hope to deliver. Their catalogues and promotional literature patently exaggerate the quantity and quality of consequences that can be expected to follow from exposing even reasonably bright, semiliterate young men and women to four years of collegiate experience. In addition, they reflect the ambiguity of the college's concept of its responsibility for and to its students in ways that are only remotely related to its central purpose, which is the life of the mind and its associated virtues.

This preoccupation with the possibilities of American higher education, if only the right formulae can be instituted to remove its inadequacies, is compounded by our national habit of continuing self-criticism. The number of annual conferences, meetings, institutes, and symposia directed to criticism of American education never fails to astonish foreign observers. The running debates, the quantity of publications, the commission reports concerning education, greatly exceed capacity for absorption and reflection.

As the late Beardsley Ruml was fond of pointing out, "Discussion of a committee report on a complex educational problem provides irresistible oppor-

tunity for critical minds." The same thing is true of educational conferences. The temptation to contribute by criticism is overwhelming. And how universally true this is. Vocal educational leaders, be they as far apart in presuppositions as Arthur Bestor and Theodore Brameld, have one thing in common. Education, as it is, is full of defects and shortcomings which in the public interest urgently need to be repaired.

Rarely do we hear from critics much about what is good about our American education. And yet that there is great good we all must acknowledge. Nor apart from justification of appeals for more dollars do we hear much about its accomplishments. And yet the accomplishments of the American system of education through two world wars, a great depression, a continuing cold war, a society transformed by science, technology, and a population explosion have been very great indeed. The remarkable thing about public secondary education, for example, is not that it has done so poorly. Given the American philosophy of educational opportunity for all and the outrageous public demands for subsidiary and even irrelevant services imposed on the public school system, the remarkable thing is that it has done as well as it has. Much the same thing can be said for American higher education.

Nevertheless, the process of elaborate self-criticism and brave proposals for corrective innovations continues. It implies disillusionment instead of confidence, and failure instead of success. David Riesman has likened this process to a never-ending "snake-like procession." The head of the procession is the educational avant-garde but it is not always easy to find where the head is. Often it is, as Riesman says in *Constraint and Variety in American Education*, "turning back on itself . . . while the middle [of the procession] seeks to catch up with where the head once was. When the middle part becomes aware, as doesn't always happen, that the position of the head has shifted, it may try to turn in two directions at once."

Thus American higher education moves continually through a series of concerns nurtured and expanded by self-criticism and the academic propensity for debate. At one time it is life adjustment, at another, general education, at another, articulation and integration, at another, equalization of educational opportunity, at another, liberation of the gifted student, at still another, the pursuit of excellence. Now apparently it is reconstruction of culture. The problem here is not unlike the problem presented in American scholarship and research by the pattern sometimes called "publish or perish." University presses, private foundations, professional journals, association newsletters, governmental agency surveys and reports constantly bear witness to the prodigious amount of research and publishing which characterizes American scholarship. The production rate exceeds capacity for absorption. We can measure the output by the ton or the square mile. A host of people of average intelligence but enormous energy are caught up in the process "half lured, half driven to collect, compile, and report without the benefit of reflection, without the incentives of a generalizing purpose and often without the critical implement of literacy" (*The American Imagination*, from the London *Times Literary Supplement*).

Now no one can deny, and certainly I do not, that in the mass scholarship activity of America there is much of value—much of value in enlarged knowledge, creativity, and original thinking and much of value for the cause of

scholarship itself. But no one denies also—not even those most avidly engaged in the process, or those most responsible for its enlargement through their control of the mechanism of academic appointment and promotion—that it is an enormously expensive and wasteful business.

Much the same thing can be said of what I have termed our habitual pattern of self-criticism. No one can deny that the "snake-like procession" of educational self-criticism and innovation provides much that is valuable and desirable. It provides much that leads to fresh, exciting experience for teachers and their students. It is a safeguard against complacency and inertia since once in a great while it produces changes which turn out to be truly important turning points in the history of education. But no one can deny also that it often proves to be inordinately expensive in time, energy, and money without demonstrable corresponding benefits in the public interest. When innovation after a while becomes mere repetition and gives way to successive innovation which in turn becomes mere repetition, one begins to suspect that much of the activity which passes for educational criticism is activity for the sake of activity and has all of the characteristics of an occupational disease.

Recently I have been reading a critical but friendly English appraisal of American culture originally published in the Literary Supplement of the London *Times*. While reading the appraisal of feverish American educational activity and scholarship, these lines arrested my thoughts: "What we are witnessing in the United States is not due to a purely American error. It is part of the universal error of believing that all good things can be deliberately procured. The modern world wants art and scholarship and sets about providing for them. If the world usually comes back from its labours with empty hands, it may be because in its comings and goings it has passed by what it was busily trying to make out of whole cloth."

I have belabored my point partly because I believe it needs to be belabored now and then in the interest of academic humility, but even more because it rationalizes the position which I share with others—I trust in sticking by the conservative tradition of education, particularly the conservative tradition of liberal education.

We are living, it is true, in a vastly different world than that of our fathers and grandfathers. It is at once a larger and a smaller world. It spins more rapidly, is more densely populated, more interdependent and interrelated. It encompasses quasi-miraculous sources of power. It engenders a host of tensions and conflicts and seemingly insoluble human problems. The modern prophets may be quite right when they say we must either reconstruct society quickly or see it perish. I do not know. But skepticism born of the study of history combined with unreasonable but habitual optimism makes me wary of blueprints for salvation through education. I am skeptical of the wisdom of making education an instrument of national policy and purpose.

There is a sense in which the outcome of the human drama through which we are living is quite irrelevant to the aims of education and its corresponding task. Let me illustrate this point by a dramatic but certainly not unthinkable example. Let us assume for a moment the kind of human predicament imagined by Nevil Shute in his novel *On The Beach*. Let us suppose only we Americans are left on earth and we know absolutely within six months to a year we, too,

will be irrevocably gone. Let us assume also that in these final months life would continue with at least as much order as it did in Australia as Shute told his story. Now, under these circumstances what meaning and purpose would education have? Would it have any? Certainly much that we now think of as important elements of education would simply cease to have meaning. Gone would be the whole educational apparatus for training people for professional tasks. Gone would be the subsidiary services education provides for the improvement of health, general welfare, and what not. Gone would be the relationship between education as an instrument of the state and the reconstruction of society. But there would still be left, would there not, that part of educational purpose which exclusively serves and supports the life of the mind for people of real intellectual curiosity? People who even under these grisly circumstances would play out to the bitter end their unique capacity of living creatures. For such people, at least, the core of what we have called liberal education would now take on new urgency. The accomplishments of man in the past, great literature, art, music, science, would continue as an instrument to explain this final, terrible predicament. One can say this and still believe, as I do, that indirectly and even directly the quality and quantity of American education may contribute to the outcome.

All of this causes me again to say I see no need to modify in this decade the aims of higher education as they have been empirically established over a very long period of time. These aims constitute a hierarchy of goals and they involve allegiance to a variety of communities. Some of the goals are immediate and attainable, some ultimate and never completely attainable but worth pursuing nonetheless. Among the latter and, so far as my particular bias is concerned, most important are these: 1) to acquaint young people with their intellectual and cultural heritage in the hope that they may appreciate, enjoy, and profit by their understanding of the past; 2) to help young people understand the significant characteristics and issues of the world in which they must live, not as auditors or spectators but as participants—as husbands and wives, mothers and fathers, and as citizens and also as unique, lonely individuals; 3) to provide opportunities and stimulation for young people to develop a solidly based and continuing interest in the life of the mind. In short to assist young people in undertaking the lifelong task of educating themselves.

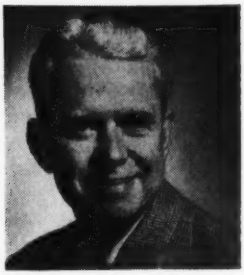
To say this does not exclude the possibility and, indeed, the need for important changes in the educational process in America in the present decade. It allows for changes in curricular content reflecting changes in contemporary civilization. It allows for and, in fact, encourages greater attention to non-Western studies, for example. It allows for and encourages use of new teaching resources and methods whether they involve independent study or televised lectures bounced off satellites or whatever improvement our ingenuity may devise to cope with quantitative problems of education.

On the other hand, at least for undergraduate education, it limits the role of the college to the kind of promise it can reasonably hope to fulfill. It stops short of any attempt to redefine and to reconstruct American culture. It avoids making American higher education, as a system, the agent of any particular value system. It stops short of any attempt to condition and train young people psychologically and conceptually for whatever the new society may be. It im-

plies less coddling, directing, sheltering, and manipulating of students in their private lives by institutional mechanisms. It presupposes that influences other than formal education in the modern world will continue to be, as they have in the past, of decisive importance in changing the conditions under which and the goals by which mankind must live and die—religion, government, business and industry, science, the arts, and indeed the whole spectrum of individual and organized human endeavor.

NOTE: Parts of this paper reflect conclusions reached in 1960 by a faculty committee at Wabash College after prolonged examination of the ends and means of the educational program of the college.

Wanted: Experimental Centers for the Creation of World Civilization



THEODORE BRAMELD

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A SHORT TIME AGO, the man admired by most of his peers as the world's most distinguished living philosopher led a great march and demonstration through the streets of London in behalf of nuclear disarmament. That man, approaching ninety years of age, is convinced that unless nuclear disarmament is achieved in the nearby future, humanity is in the gravest jeopardy. His name, of course, is Bertrand Russell.

Also recently, a man almost equally acclaimed by his peers—this time as the greatest living German philosopher and one of two or three of the world's leading existentialists—published a book in America entitled *The Future of Mankind.* Its theme is that atomic energy has made the self-destruction of civilization for the first time a literal probability. The philosopher's name: Karl Jaspers.

In America, meanwhile, no philosopher of even modest stature has been warning us in audible tones of the mortal danger that threatens contemporary mankind. A few other leaders, to be sure, may speak in this vein—occasionally with vigor. But even when they do manage to command an audience, rarely do most Americans appear to be seriously listening.

Why is this so? Why does America, almost alone among great nations, seem infected with such chronic indifference, such callous calm, when it hears the voice of Englishmen such as C. P. Snow, who, speaking at Christmas time last year before the American Association for the Advancement of Science, warned his fellow scientists in measured words of his dreadful fear that the third and final planetary war will occur in less than twenty years?

To offer any kind of searching answer to these questions would require elaborate interpretation of the curious state of our American culture as we push well into the second half of our century. I have neither competence nor space to attempt that answer here. I do, however, assert that in the degree that the indictment is justified at all, higher learning in America must accept a heavy share of the responsibility. Where else, after all, if not in our colleges and

universities, should America be producing men of the intellectual and moral stature of a Russell, Jaspers, or Snow? Certainly in my own field of philosophy, where the larger share of professional scholars are so enamored of logical analysis as to look with imperious disdain upon almost any philosopher who dares to speak of the great contemporary issues of human life and death, I fail to detect such men.

Yet within our colleges and universities are to be found many able scholars who, given just a little encouragement, would eagerly place their finest abilities, their highest standards, their keenest imaginations, at the service of an opportunity to answer one question which, before all others, we are now compelled to answer. This question is: *Can the higher learning in America, hand in hand with that of other nations, contribute in vigorous and concerted ways to the creation of a world civilization*—to the first world civilization on earth, a world civilization without which *all* civilization may indeed abruptly end?

I should like now to outline a way by which this most urgent of opportunities can and should be faced with minimum delay.

In briefest terms, I propose that a substantial number of both large universities and small colleges establish a chain of what shall be called, for the time being, Experimental Centers for the Creation of World Civilization. The precise structure and operation of each Center will vary with given institutions, one perhaps consisting of only three or four professional participants, another consisting of staffs of fifty or even more scholars. Graduate students will be able to obtain master's or doctor's degrees, but undergraduates will be affected chiefly by feedbacks into their learning experiences through research and action programs developed in the several Centers. Thus, one of their chief functions will be to provide radii not only toward the whole of the particular institutions where they are located, but toward nonparticipating institutions in various parts of this country and abroad. Eventually, indeed, it is hoped that many such Centers will develop in foreign countries such as India, where one detects an already greater readiness than is common in the United States.

Five basic features should characterize all Experimental Centers for the Creation of World Civilization. A crucial group of assumptions grounded in the philosophy of education, the behavioral sciences, and other disciplines are implicit in each of these features. I must emphasize that limitations of this presentation prohibit their explication except in compressed form.

Feature number one. Each Center proceeds from the assumed conviction of its participants that the world is confronted with an unparalleled crisis, centering in but by no means limited to the fact that the Atomic Age is now well upon us and that we cannot turn back. The revolutions in politics, economics, technology, and ideology, with their profound effects upon ethics, religion, art, education, and science, are all enmeshed with the undeniable truth that man, for the first time in his entire history, now possesses weapons to destroy overnight the nerve centers of every nation on earth.

We cannot, however, expect perhaps more than a minority of faculty members of any institution to agree upon even this first assumed conviction. Or, even supposing that most do agree verbally, we cannot expect all of them thereby to behave differently. Proponents of any Center will find it debilitating to debate

indefinitely the pros and cons of the thesis of philosophers like Russell or Jaspers. Such a debate could also delay indefinitely any organizational decision to launch the new venture. The intention, then, is to enlist for the staffs of each Center only those members of a given faculty who are prepared to accept and declare their conviction that the first assumption is completely justified.

Feature number two. The assumption governing this second feature is as positive in its affirmation of the goal of world civilization as the first assumption is negative in its condemnation of the threat of humanity's annihilation.

This second feature, that is to say, recognizes that higher education cannot be expected to respond with enthusiasm to a largely negative motivation. The threat of atomic warfare, however monstrous, will not succeed in producing the kind of intellectual and emotional audacity that is now required. Thus the second feature focuses upon the need for and commitment to world civilization as the first imperative of our present age—indeed, as the one alternative that could through its constructive vision and power defeat the forces of destruction. Scholars who joined an Experimental Center would therefore willingly express this commitment as a condition of affiliation.

In the affirmation of normative commitment, this proposal admittedly departs from the tradition of "objectivity" and "neutrality" which has so largely permeated American higher education. To be sure, careful students of the matter agree that this tradition is not, in actual experience, as tenable or as workable as it often superficially appears. Rather, the history of higher education in America as well as in other countries reveals a welter of cultural values that shape curricula, that influence research, that constrict the scholar's academic freedom to pursue the truth as he sees fit. Nevertheless, the imperfection with which the standard of objectivity has in fact functioned is not necessarily a reason for repudiating it. Nor does the proposal advocate its repudiation for the institution as a whole. The standard of objectivity, however difficult to define adequately or implement practically, remains an admirable one.

What I do propose is an officially recognized place in the college or university for a group of scholars who are not only permitted but encouraged to indicate cooperatively and publicly what many of them may now indicate individually and sometimes only privately. In other words, the higher learning, at least in our age of upheaval, if not in more normal times, has an obligation also to provide deliberately for scholars who do express bold commitments—in this case, commitment to world civilization as against allegiance to merely state or national authority which most of us already profess.

Let me stress, however, that the kind of commitment of which I speak is not to be confused with dogmatism or doctrinairism. The many scholars as well as other citizens already committed to the goal of world civilization rarely claim that they know the answers to a vast array of questions which such a commitment immediately generates. For example, the brilliant social scientists, philosophers, physical scientists, and others who have been working for several years in the Committee for the Study of Mankind (founded at The University of Chicago in 1952) have discovered, on the contrary, that even the single term, mankind, is exceedingly difficult to define in any profoundly comprehensive sense. At the same time, most participants in the deliberations of this com-

mittee probably agree that world civilization, at least by contrast with the fragmentations and conflicts of races and nations that have thus far typified human history, begins to acquire a significant core of planetary meaning. Thus, with the aid of such a young science as anthropology, men are for the first time coming to understand, not as a speculative wish but as a scientific fact, that human beings everywhere on earth do possess certain intrinsically common qualities, such as the capacity to love, out of which they may create common aspirations and eventually perhaps common institutions.

Permit me to convey the significance of this second feature in another way. Can we not contend that the commitment to world civilization for our time is similar in crucial respects to the commitment of Thomas Jefferson, Thomas Paine, and other founders of our nation for their time? When they were first seriously challenged to conceive the image of a United States of America, they, too, were beset with bewildering, novel questions. Yet they, too, were fervently, unreservedly, drawn toward a goal which could fuse together the disparate groups of the new world into a functioning unity. It was, indeed, only when enough of them could agree upon this kind of powerful commitment that they were able to go forward to the herculean tasks of specification—tasks which they finally accomplished by establishing the then revolutionary federal system that governs us today.

The goal of world civilization, granting that it is even more complex and hazardous to achieve, is also still more urgent than the goal of a United States two centuries ago. The higher learning, meanwhile, has expanded in stature and influence far beyond anything that even Jefferson's fertile imagination might have conceived. In helping to accomplish for mankind as a whole what a few courageous, farsighted pioneers accomplished for one continent, the potential role of higher learning thus emerges as both a solemn and invigorating one.

Feature number three. To establish still further safeguards against the dangers of special pleading and indoctrination—dangers which admittedly lurk in the radical value of normative commitment perhaps as often as irresponsibility and hypocrisy lurk in the traditional value of objectivity—every Center should invite and encourage critical reactions from all members of the faculty not directly associated with the Center policy and program. Some of these members will doubtless prove to be opponents of the whole purpose of world civilization: Let them then with utmost candor and realism serve as resource specialists whose task is to analyze every dimension of that purpose as it may develop through the research and theoretical activities of the Center itself. Through an open, uncoerced dialectic of scholarly disputation, the program should be subjected to a self-correcting, continuous public process of dissent and consent alike. Only thus can errors be exposed, weaknesses corrected, defensible proposals sustained.

More than this, the Center personnel must itself become interdisciplinary throughout. Problems and proposals of world civilization cannot be attacked fruitfully by philosophers alone, or by political scientists, or by any other single group of experts. Actually, the more cross departmental the better: Artists as well as scientists, religionists as well as educators, psychologists as well as sociologists—all should be included whenever and wherever scholarly resources prove available. Also, when circumstances permit, scholars should be invited

from other institutions, including foreign ones, both to augment the staff on a relatively permanent basis and to provide an exchange of visiting experts from other Experimental Centers. Here the rich experience of the presently functioning Center for Advanced Study in Behavioral Sciences at Stanford, California, should be drawn upon—recognizing, however, that its own interdisciplinary structure is considerably narrower than the one I propose, recognizing also that the California Center is governed by no encompassing commitment through which its members channel their diverse abilities.

Please note, however, that a chief purpose of the proposed interdisciplinary policy is not only to assure a broad flow of investigations but, equally, to guard against the congealing of commitments into intellectual or emotional rigidities. The free play of criticism, the principle that no conclusion ever reached is irrevocable, the experimental approach to every venture—all are enhanced not only by the steady flow of communication between the Center proper and the wider academic milieu but by the pluralistic character of the staff itself.

Feature number four. The title suggested, please recall, is: Experimental Centers for the *Creation* of World Civilization. It is now important to elaborate another key feature—namely, that every Center is concerned with action as well as with study, with practice as well as with theory, with means as well as with ends. The emphasis I have intentionally placed upon the end or goal of world civilization is hereby counterbalanced by an equal emphasis upon the role of the higher learning in resolving human conflict by direct participation in rationally planned, world-wide reconstruction.

Once again, therefore, the Center departs from one of the conventional standards inherent in much of our education today. Not, of course, that colleges and universities have taken no part hitherto in community programs concerned with social change. Of course they have taken part, perhaps in increasing degree. On the whole, nevertheless, this kind of participation has tended to be hesitant, eclectic, and sometimes stultified by the hostile standard of alleged objectivity.

And yet, how many of us would care to deny that education on every level is *already* involved, whether it always professes so or not, in the perennial conflicts of the wider culture? One need only recall the nightmare of McCarthyism, the aftereffects of which are still poisoning academic freedom, or the zeal with which many universities and colleges have entered into defense contracts with the federal government, to demonstrate how pervasively, if at moments surreptitiously, political, moral, and other conflicts saturate curricula, research, administration—in fact, the whole educational fabric.

The Experimental Centers cut through such ambivalences, pressures, and intimidations. They avowedly insist, not only that higher education is itself the *object* of multiple conflicts, but that it is and should be both active *agent* and creative *participant* in virtually all of them. Conflict, moreover, is considered by no means an unmitigated evil. Indeed, no institution of higher learning, responsibly concerned as it should be with the cutting-edge issues of our age, will at times avoid the deliberate *intensification* of conflict (a phenomenon already dramatized by the thousands of Southern college students, both Negro and white, who have recently engaged in nonviolent efforts to reduce segregation) if, through such intensification, long-range humane values are advanced.

By the term "creation," I mean accordingly the kind of conflict resolution that is directed, on the one hand, by the overarching goal of and commitment to world civilization, and, on the other hand, by the keenest methodologies and social strategies of action research that the sciences and the arts of man are able to provide. Such research should play a vigorous role in a great range of agential activities, from interpersonal to intergroup and international programs of practice—racial, economic, political—all of them governed consciously and directly by that goal and that commitment.

At this juncture, may I also make clear what the Centers certainly are *not*. Of course they are not *the* agents of planned cultural change toward world civilization. Political and economic institutions will doubtless continue for a long time to come to be the major centers of power in behalf of any kind of basic change, unplanned and planned alike. Because formal education is at most only one instrumentality that can be utilized in the gigantic struggle to advance toward world civilization, we have no right, however, to conclude that it possesses no power whatever to vitalize that struggle. Such an inference is defeatist to the extreme; it is precisely the kind of inference that has lately been heard in America among influential voices in the ranks of educational leadership—particularly voices seeking to persuade us that the whole experimentalist or progressivist conception of education as a creative social force is now largely obsolete.

The Centers that I urge should, on the contrary, accept while also strengthening this experimentalist-progressivist conception. They should repudiate the neoconservative apologist for academic conventionality who thereby helps to rationalize whatever indifference or complacency is found to be chronic in higher education today. They should throw their energies into cooperation with UNESCO and other international agencies presently active in a great range of action research. They should utilize to the fullest possible extent whatever skills and experience in community involvement are now available—social work is an instance—in other divisions of the university or college. Above all, the Centers should rechannel and integrate the piecemeal if not often aimless and narrow quality of much of the organizational and academic effort now expended in this kind of involvement.

Feature number five. I wish here merely to elaborate a point earlier made to the effect that no two Centers could or should be exactly alike—hence that the programs to be developed by any particular Center should be tailor-made to fit the resources, interests, limitations, and opportunities of each institution that decided to join in this frontier adventure. Here I may illustrate and thereby perhaps clarify some of the general features hitherto described.

Consider as one example the awesome problem of the world's exploding population. In the context of world civilization, two highly complex questions immediately arise from this problem. The first is that of the maximal size and distribution of population that can be maintained on our planet in, say, the year 2000—a population commensurate with scientifically established standards of living essential to a healthy human race. The second question is: How can population expansion be regulated by family planning and other means so that the end of such a rationally balanced population can be guaranteed?

These two questions are by no means, of course, totally ignored today by higher education. This is all to the good. I think you must agree, however, that they are usually treated sporadically if not overcautiously by a variety of specialists with little or no command of the team approach that they now require. Actually, the problem calls for a whole range of cooperating experts in fields as diverse as demography, physiology, political science, anthropology, and—because population control is a profound moral problem, too—certainly philosophy. An Experimental Center of the kind envisaged would correlate individual efforts, focus relevant tasks, and reduce waste motion. It would do these things, moreover, always in the setting of the larger patterns of world conflict and world order within which the problem rests and without which it must fail of resolution.

Equally dramatic examples of potential agendas could be drawn from the literary, musical, and graphic arts, from medicine, from law, from religion—in fact, from every field of learning that bears upon the Center's ends and means. (And what field of learning does not bear upon it?) It is possible, however, to select here only one additional example, in this case from education itself. As I am sure you know, one of the frontier specializations now emerging in a few of our larger institutions is comparative education—a field which pays attention to the tremendous range of educational theory and practice throughout the world, at the same time that it serves the admirable purpose, among others, of reducing the typical provincialisms of American classroom teachers. Any Experimental Center for the Creation of World Civilization with resources in this field could well adopt as one of its action programs a comprehensive approach to some of the tasks that educators ought now to be performing in, say, the world's underdeveloped areas—tasks through which colleges and universities should be governed by a much clearer sense than they now reveal of their own international responsibilities. A program of comparative education thus vitally related to such responsibilities could be transformed from the polite and dreary survey of national school systems, which it sometimes has been, to an aggressive partner in political and economic change. The comparative educator thereby could become a full-fledged associate of the anthropologist, the philosopher of education, the public health expert, and other interdisciplinarians. Thereby he could help to cope with problems of race prejudice, of ethnic conflict, of human relations on many planes. Thereby he could help to influence the emotional patterns of millions of children now growing up to be next door neighbors on our shrinking earth. Thereby, also, he could return to share his experiences with colleagues and students in conventional teacher-training programs so as to enrich and broaden their own appreciation of the profound truth that good education, after all, is only as good as the human beings who learn to live creatively together.

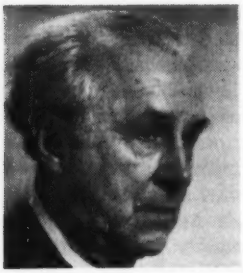
I have tried to dramatize the urgency of the challenge to higher education through a concrete and workable proposal. No one denies, of course, that much of what now goes on deserves commendation; indeed, I have pointed to some present interests and activities in our universities and colleges that could be channelled into the proposal. At the same time, it is not my intention to suggest that an Experimental Center for the Creation of World Civilization should be

considered merely as one additional appendage to our already overcomplex, overburdened programs of instruction and research. The focal question is one of priorities. To launch and operate a successful Center should mean that some other conventional courses or research activities will no longer occur, and that some members of the faculty will wish to substitute part or all of their older obligations for the rigorous and pressing ones implied or stated in this design.

At the same time, one need not be so utopian as to expect that most of our polyglot of educational programs and objectives will, in the immediate future, yield to new imperatives. The wheels of the higher learning grind slowly indeed. What I do advocate is one, and only one, immediately practical way of facing the compulsion voiced by Bertrand Russell and by other of our greatest thinkers. No serious financial obstacle impedes that practical way. Almost any college or university with a nucleus of scholars of the kind described could, if it so wished, establish at least the beginnings of a Center within a single year. Once under way, I am confident, moreover, not only that the great philanthropic foundations would offer generous support—so too might the federal government. The philosophy behind the Center reflects, indeed, more than a little of the maturing political philosophy of responsible world-mindedness that may be dawning not only in the United Nations but in our own national leadership. The new Peace Corps is one auspicious sign.

The decades in which we live are of such peril as to produce in many of us a kind of moral and social paralysis. Yet the faculties and student bodies of our colleges and universities contain many deeply troubled men and women, both old and young, who perceive both the unprecedented dangers and the magnificent promises confronting mankind at this juncture in its evolution. They await opportunity to prove how ready and competent they are to translate that perception into a working and aggressive synthesis—a synthesis of concerted action and defensible commitment.

Higher Education and the Future of Mankind



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YEARS OF DECISION! Indeed, they are ahead of us. Especially for higher education there are decisions of a magnitude the world has never known. Decision may include initiative. Yet this should not impel us to believe that everything we have had so far has to be remodeled from top to bottom like an old house. For the art of deciding requires that one first take stock in order to find out to what degree the experiences and achievements of the past and present can be organically and elastically led over into the future. True, as a consequence of our changed political situation, a new conception of mankind has emerged. Yet, American higher education will have essentially the same task that it has had so far. Certainly we should not flatter ourselves into believing that our colleges and universities have lived up to their professed ideals. On the contrary, many have failed miserably. Nor can they excuse themselves by saying that they have had no guides for orientation.

When, in January 1934, I came to this country, I could review the whole year's literature on higher education on three to four pages. Only a few years later it began to swell to such a degree that it now would take seven days a week to read all of it. Almost every institution of higher learning has had its committee for the discussion of problems such as education in a free world, quality and equality in a democracy, general versus specialized education, the role of the liberal arts, of science and of graduate training in a changing world, and the moral implications of higher studies.

Though dealing with a different age level, our elementary and high schools also have been busy. Many of them have been perhaps one sided and have failed to see the totality of their functions in terms of subject matter to be taught and learned. They have been more interested in teaching our youngsters how to live rather than how to learn. Nevertheless, perhaps more than many of our liberal arts colleges which have remained all too complacent in their focus on subject matter to be imparted, the schools have been deeply concerned with what, after all, matters most in education at whatever level; namely, the role of the growing person in our modern society.

This continues to be the basic problem of education—including, by all means, higher education—in a world that must reorganize itself in order to survive. Certainly, the appearance of the Sputnik was a shock, but it did not require the Sputnik to wake the educators up. It was the general American public to which the Sputnik brought the sudden realization—already experienced by the educators—that the time of safety was over. Even this sounding of the tocsin, however, was a dubious service to higher education as trustee of the future of mankind.

For, by directing our attention one-sidedly to science and atomic warfare, the Sputnik deflected the interest not only of the public, but, in particular, of educators, from profoundly humane problems, which will remain central in spite of the sputniks that orbit the earth. For the sake of the future of mankind and humane civilization, this grave deflection must be rectified. In the interest of the future of mankind, higher education must be restored to its own proper orbit. This is nothing less than the *humanity* of man struggling for civilized survival on a cosmic scale. This restoration of higher education to its own proper orbit is made all the more difficult—and, at the same time, all the more urgent —by a pervasive circumstance. This is that, if not actually in a state of revolution, mankind is in a state of accelerated evolution which is radically modifying not only man's outer situations but also the very bent of his mentality. It is this which challenges higher education to a degree unforeseen even at the end of World War II. Higher education is challenged, on behalf of the very future itself of mankind, to undertake this deep moving modification in the fundamental set, perspective, and range of the human mind.

Yet, contrary to the claims of many spokesmen for American higher education, this does not mean a fundamental break with our educational and cultural past. Rather it calls for creative application of the educational wisdom of the past to the emerging crises confronting mankind. It calls for uniting traditional wisdom with new insights toward making viable the emerging patterns of obligations to which our institutions of higher learning will have to respond, and which they will have to inculcate in their student.

To make clear the nature of this process, let me organize this paper, somewhat pedantically, according to three rough and overlapping categories—the quantitative, the qualitative, and the ethical.

The quantitative responsibility lies in the bewildering expansion, division, and specialization of the traditional disciplines of thought and research. In regard to the natural sciences this is so obvious that it needs no further description. But even the sciences of man and society, or broadly speaking, the humanities, generally considered more stable because less accumulative than the natural sciences, have burst their old frame. The liberal arts are certainly no longer what they were when I went to school. We have now with us the burgeoning social sciences reaching from sociology to historical and comparative anthropology. The philosophical and philological disciplines have to include more and more approaches to the ever-widening interests of mankind; and if you take a textbook on economics of the year 1960, it has little in common with one written at the turn of the century. Finally, the study of education itself has become so wide in its ramifications and applications that only those who under-

stand little or nothing about it can dare make sweeping judgments about its role and obligations in our modern society. Of these, unfortunately, there are many.

In addition, the quantitative aspect of higher education is today immensely enlarged by the growing number of students. We hear that a few years hence fifty per cent of our youth may attend one or another institution of higher education. I personally do not believe that this is sound and am afraid that it will one day put us in a difficult situation. We shall find ourselves in a situation in which university graduates who, as a consequence of their long academic training, expect more from life and society than they can be given. It may still be worthwhile to remember that the vanguard of the most dangerous revolutions of our time have consisted of a grudging and restless "academic proletariat." In the interest of our youth and of the country let us be aware of the lure of great numbers, and let us provide the proper safeguards. With modifications required by the change of time, Jefferson's plan to recruit an artistocracy of talent out of a broad social foundation is still the only one that will work, because it is just, realistic, and appreciative of excellence. Yet even if the number of students expanded merely as a response to the growth of scholarly disciplines and social needs, there would remain the formidable task of training a sufficient number of men and women who are competent not only as scholars, but also as teachers. But about this problem every layman can now read in our newspapers.

In discussing the topic of competence, I have already moved from the quantitative to the qualitative aspect of higher education. As every other nation of today, so also the United States is a part of an industrially, scientifically, and culturally cooperating world. Even in distrust, the United States is bound to cooperate. Therefore, our universities can no longer live in the comfortable belief that they have done their duty by educating good professional men as needed by their own people. We will send more and more men and women out into foreign lands. Watching our nationals in several countries, I have sometimes seen wonderful achievements. But sometimes what I have seen has made me feel sorry for the prestige of this country. Too many American workers overseas have not been sufficiently conscious of an important fact. This is that they not only represent a field of technical expertness or a company, but that they are diplomats of a sort. As such, they are often watched by the common man more closely than the professional diplomat who lives under the protection of a certain etiquette.

At the same time, students from foreign, and mostly underdeveloped, countries will attend our universities in ever larger numbers. We must not believe that we have done enough if we just allow them to participate in our courses and seminars. Even if they have registered in a so-called research course—whatever that may be—they need the benefit of a personal exchange of ideas. Otherwise they may apply at home one-sidedly and even dangerously the learning they have received here.

Few operations require more wisdom than the proper transfer of accomplishments of one country to the conditions of another. This is especially true with education. One cannot simply transplant the structure and program of schools from one people to another according to preconceived opinions gained from the standards and experiences at home. For only in a remote way can the

means and goals of education be derived from an abstract concept of man; they must harmonize with the lives and ideas of men in particular circumstances. The planners and organizers of higher educational institutions, whether they work at home or as consultants to foreign governments, will have to take into account the religious beliefs, customs, and traditions of a specific people. And, however much they may be convinced of the existence of overarching and transcultural values in the life of humanity, they will have to gear the programs of teaching to the work of the men and women in their communities, as to their individual talent.

Few operations, moreover, require at the same time more modesty, more self-examination, and more willingness to abandon cherished habits and perhaps even unconscious superiority feelings than work in a foreign country. And it is a small comfort for our own mistakes that satire and criticism have been leveled against any nation whose nationals appear in large numbers in other countries.

But the task of educating for international needs is not done with teaching our students manners. The undesirable effect of foreign contacts can be avoided only if we re-examine our time-honored and, alas, often so superficially applied concept of "liberal" education. The term "liberal" is qualitative. Originally, it meant the freeborn man who alone had the right to be educated. Today it should mean the person who has been able to free himself from a narrowness and prejudice through his familiarity with a sufficient number of different modes of thinking and of those treasures of human wisdom on which the civilization of the world are built and on which the future of mankind depends. This scope of understanding, or this liberal education, has always been the mark of great and humane men. And much though it depends on a certain amount of knowledge, it is more than a mere accumulation of knowledge. Rather it is the result of an act of integration, of synthesis. This, however, becomes increasingly difficult with modern specialization.

Thus, not only in view of our own mental development, but also in view of our relation to mankind, one great challenge arises. We must organize higher instruction in such a way that it does not merely provide a sort of miscellaneous education that consists of so many bits of knowledge, superficially acquired during the freshman and sophomore years and then quickly forgotten. Rather we must try to help our academic youth to cultivate their minds in such a way that they understand the deeper principles and relationships that make an order, or a whole, out of the plurality of modern experiences and impressions. This is accomplished only if we, as educators, help young persons not only to spread broadly, but to find, at the same time, their own personal center of gravity and hence center of unity. Only so can they plant their professional work in a matrix of broad and at the same time interconnected interest, and this capability will even fertilize their specialization. For all creativeness is a combination of attention to detail and wealth of associations.

In essence, the problem I am discussing is not merely one of knowledge, though knowledge is indispensable. It is just as much an attitude, a way of looking at things. Call it a vision. For all we can have when we use words such as "mankind," or any concept that points toward wholeness, is vision. To comprehend mankind in its whole and concrete actuality, or the universe of man,

is just as much beyond the limits of the human mind as the universe of nature.

Just as the quantitative and qualitative aspects of higher education overlap, so the two together overlap with the third category I have suggested; namely, the ethical. By using this term I do not mean moral education in the customary sense. I personally believe that our universities, and especially our undergraduate colleges, have a profound responsibility in this respect. For youth in the malleable and at the same time extremely exposed age of late adolescence and early adulthood, often separated from home, community, and friends, must not be allowed to float adrift on an ocean of new impressions, new tasks, and of inner turmoils such as are inevitable in a lively young person. Yet the morality of higher education, if you want to use this word, is not the same as the morality of a church, of a moral rearmament movement, or of a comradeship united by common moral aspirations. All this is important, for it forms a character; and character is more important than knowledge.

But everything has to have its place in the human order, and the point of gravitation of higher education is in the realm of the intellect. Its primary aim is to educate a person in whom the rational qualities and the loyalty to truth are so developed that they influence his whole judgment and conduct. If a student is unable to lift up his life standards by the vicarious participation in the thought and work of men who have directed mankind's pursuit of truth, justice, and happiness, he does not belong in an institution of higher education.

Here, it seems to me, is the main link between the idea of the university and the idea of mankind and hence between higher education and the future of mankind. The form of liberal education we should aim at as the base on which to build specialized knowledge should deepen in our youth the awareness that, as human beings, they are a part of mankind, not only in a numerical, but also in a spiritual sense. The more they learn themselves and about themselves, the more they should also learn about humanity. It is perhaps in solitude, even in loneliness, that one understands mankind.

Yet, the numerical side itself has powerful implications. About three billion people inhabit the earth. Provided the ratio of increase continues, there may be four billion in 1980 and six billion by about 2000. All future generations will be affected by this development, for even with a rapid increase of their industry and agriculture at least one-third of this gigantic mass of humanity will be underfed and therefore a source of envy and dangerously aggressive tendencies.

More and more will the privilege of belonging to a wealthy nation demand the willingness to share and to sacrifice, especially in view of the rivalry between the free world and the communist peoples. With the Chinese already comprising one-third of the world's population, the communist nations will have the majority. They will use their numerical and ideological pressure wherever they find a political vacuum, and so will we.

But mankind must mean more to our graduates than problems of food, fear, and rivalry, if they wish to retain a leading function in the future of world civilization. They must understand foreign populations not merely from the political, economic, and anthropological point of view, as isolated entities which, as a consequence of industry, warfare, and air traffic, have become more and more aware of each other. Neighborhood, as we all know, sometimes creates more hostility than friendship. Instead, our students must learn how

to understand foreign populations as communities that show not only the human quality of self-assertion with all its virtues and vices, but also the desire to participate in the common hopes and aspirations of the human race. More and more of the new nations will come and ask us what we really mean when we talk about the dignity and the natural rights of man.

The concept of humanity as I have outlined it here has nothing to do with false cosmopolitan sentimentalities. As these have done in the past, they may also in the future do more harm than good. In view of our international tensions, vigilance is still a necessity. On the other hand, our schools, from the elementary grades up to the colleges and universities, have all too often lost sight of the fact that all true education aims at values of universal, not of segmental and fragmentizing, quality. Too often have educators all over the world succumbed to waves of political propaganda, have confused the virtue of patriotism with the vice of chauvinism, and have yielded to the influence of groups more interested in dividing than in uniting. Let us not believe that this fault is corrected by comparative methods in the teaching of history, literature, anthropology, and education. I am thoroughly in favor of such new approaches, and I did my share in the development of comparative aspects among German and American students before this was fashionable. But methods as such are morally neutral. They may be found to be just as useful in the training of spies and ruthless exploiters as for the education of gentlemen endowed with the gift of humaneness. The final criterion of the human value of all these methods lies in the *spirit* in which they are taught and apprehended. What we have to teach is the kind of inner comprehension which works not only by the gift of reason but also by the gift of active sympathy, and which will not be disenchanted even in disillusionment.

We must remind our students that we have to choose between either the further development of a highly organized and extremely efficient form of neobarbarism, or a true sense of loyalty to the great civilizing prophets of humanity whose words, though spoken in different languages, times, and countries, have been the ever-binding and reuniting forces in the history of mankind.

About the year five hundred B.C. the Chinese Confucius said, "Within the four seas, all men are brothers." About four hundred B.C. the genius of India created the Bhagavad-Gita, at the beginning of which the god Krishna admonishes King Arjuna on the field of battle to fight since this is now his destiny, but to fight without hatred. In the Old Testament we have the grand vision of the prophet Micah that has been chosen as the motto for the United Nations, "And they shall beat their swords into plowshares and their spears into pruninghooks; nation shall not lift up sword against nation, neither shall they learn war any more."

The Role of Higher Education in the Developing Space Age

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THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION was created in 1958 because it was felt that the nation's space program should be—in the words of the National Aeronautics and Space Act of 1958—"for the benefit of all mankind." Space exploration holds promise of adding importantly to our knowledge of the earth, the solar system, and the universe. This exploration is directed by a civilian agency in order to provide the fullest cooperation of the scientific community at home and abroad. Moreover, a civilian setting for the administration of space functions emphasizes the concern of our nation that outer space be devoted to peaceful and scientific purposes.

At its birth, NASA absorbed the National Advisory Committee for Aeronautics, a highly respected, forty-three-year-old aeronautical research agency which had also participated in space research. To the 8000 NASA scientists, engineers, and technical and administrative personnel in a Washington, D.C., headquarters and five field centers, other excellent groups were added to form

the new agency. Among these were the 157 staff members of the Naval Research Laboratory Vanguard group who came over on November 30, 1958, and the approximately 2500 people of the Jet Propulsion Laboratory, operated under NASA contract by the California Institute of Technology since December 3, 1958. On July 1, 1960, more than 5000 people of the Development Operations Division, Army Ballistic Missile Agency, Huntsville, Alabama, were added. Today, our total employee strength—excluding the Jet Propulsion Laboratory—is more than 16,000.

We now have an all-around space research and development capacity. In this regard, despite NASA's necessary growth during the last two years, we are determined that universities and industry shall get an ever-increasing share of NASA budget dollars. Contract participation currently amounts to more than seventy-five per cent of those dollars. We feel that the NASA staff should be kept at the level required to plan the space exploration program and to organize, to contract for and oversee its implementation, and to conduct sufficient in-house effort to maintain the caliber of our scientific and technical personnel.

The budget for Fiscal Year 1961 provides $171 million for salaries and personnel expenses of the NASA organization. Contract effort provides for the construction of new facilities and the support of the research and development activities. The Fiscal Year 1961 budget authorized $123 million for construction and $621 million for research and development. The research and development includes work on propulsion systems, propellants, power supplies, structures and materials, guidance and control, instrumentation and telemetry, and aerodynamics, as well as the development of launch vehicles and the conduct of the satellite program.

As stipulated in the Space Act of 1958, NASA is required "to develop and operate space vehicles for a variety of purposes." These purposes can be roughly divided into these categories: unmanned scientific exploration, manned space flight, and application developments. The budget includes funds for a variety of unmanned scientific satellites, manned exploration, and satellites for development of meteorological and communication systems. Also included in the budget are funds for research and study of many additional satellites which will be flown in future years.

Unmanned scientific exploration. We have planned a large number of unmanned scientific satellites. The purposes of these satellites range from investigating the earth's atmosphere, the ionosphere, the energetic particles and fields about the earth, to investigating the sun and the galaxies. These satellites have been specially tailored to each particular mission or series of missions.

Among our most successful experiments to date have been the Pioneer series of space probes. Pioneer V, for example—launched into solar orbit on March 11 of 1960—was tracked into space to a distance of 22.5 million miles, still the greatest distance any man-made object has been tracked. Pioneer V sent back scientific data on conditions in space until communication contact was lost on June 26, 1960. This space probe gave us new and valuable information about cosmic rays, the earth's magnetic field, solar "storms," and evidence of the existence of a large "ring current" circulating around the earth at altitudes of from about 30,000 miles to 60,000 miles.

Launch vehicles, such as the Agena and the Centaur, will soon be available,

with greatly improved load-carrying capability. Detailed plans have been made and work will soon begin on an Orbiting Geophysical Observatory, based on the use of the Agena. This observatory will be one of our first standardized satellites, with a stock-model structure, basic power supply, telemetry, and command system. Its modular compartments are capable of carrying fifty different geophysical experiments on any one mission. For this reason, it is often referred to as the "streetcar" satellite. The observatory will be about six feet long by three feet square. The two solar paddles used to collect energy from the sun will be about six feet square. The satellite will weigh 1000 pounds and will include 150 pounds of scientific experiments.

NASA also has well-advanced plans for exploring the moon. A lunar spacecraft—known as Ranger—has been designed to carry an instrument package built ruggedly enough to survive a crash landing on the moon. Then its instruments will record and radio back to earth data on the make-up of the lunar surface. We will begin test flights of Ranger this year, using the Atlas-Agena launch vehicle. Following Ranger will come Surveyor, a spacecraft that will be able to make a "soft landing" on the moon. More delicate scientific instruments than those in Ranger can thus be employed.

Also under way is a spacecraft that will fly close to Venus and Mars, and later perhaps to other, more distant planets. This spacecraft, called Mariner, will carry instruments to measure planetary atmosphere, surface temperatures, rotation rates, magnetic fields, and surrounding radiation regions. The Mariner series will be launched by our Centaur vehicle. The lunar and planetary explorations are not only for scientific investigations but also to initiate the technological developments that will lead to eventual manned flights throughout our solar system.

Manned space flight. NASA is responsible for this country's first manned exploration of space. The Mercury project which has top national priority has as its objective the orbiting of an astronaut about the earth. NASA picked seven astronauts from among hundreds of men with excellent military test-pilot backgrounds, and has had them in rigorous mental and physical training for their job. Each of these exceptional men specializes in some phase of the program. For instance, one has become expert in the recovery phase; another has concentrated on the capsule's life-support phase. And each man brings to his mission his own specialized experience and contributes it to the project. The astronauts have all had important things to say about the design of the capsule, its safety factors, etc., based upon their flight experience in aircraft.

The main capsule is now in the shakedown phase, having been modified in many ways during the research and development period. From the inception of Project Mercury, safety has been a primary concern, and the agency is determined that an astronaut will not be launched until the risk factor is at an absolute minimum.

NASA tentatively plans to launch the first manned, suborbital flight and the first manned orbital flight in 1961. Numerous qualification tests—using unmanned capsules and capsules carrying specially trained chimpanzees—will precede the manned flights.

The Mercury Program is the start of our investigations with man in space. The Mercury capsule is small, has limited flight duration, and has essentially no

maneuverability. Mercury is in itself useful as the initial phase of an ongoing program. Future manned spacecraft will carry crews of two or more astronauts, provide them some freedom to move about in a "shirt sleeve" environment, and assure sufficient flight duration and maneuverability for missions varying from earth orbiting to lunar orbiting and return. We now have industrial contracts for the study of this type of mission, which we call Apollo. The Apollo spacecraft will weigh 15,000 to 20,000 pounds and will require a launching vehicle designed especially for space missions.

Development of this launching vehicle, called Saturn, represents one of the major portions of NASA's effort. This first stage is designed, fabricated, and is undergoing static firing tests at the Marshall Space Flight Center, at Huntsville, Alabama. The cluster of eight engines will provide 1.5 million pounds of thrust for more than two minutes. Later this year, this experimental vehicle will be carried on a barge from Huntsville, on the Tennessee, Ohio, and Mississippi Rivers, to the Gulf of Mexico, and thence to the Atlantic Ocean and Cape Canaveral. Launchings will be made from two complexes being constructed at the north end of the cape. The gantry towers for these complexes will rise more than 300 feet above the beach.

A two-stage Saturn will place the Apollo spacecraft in an earth orbit. With the addition of a third stage, Apollo will be accelerated to a velocity sufficient for making a lunar inspection, but the available propulsion will not be adequate to effect a lunar landing. We are investigating advanced propulsion systems, both chemical and nuclear, which may lead to a single launching vehicle to carry explorers to the moon and back.

Another possible approach involves the use of Saturn vehicles, with assembly of a lunar landing vehicle in orbit by rendezvous techniques. We are conducting analytical studies and supporting technological development on these various possibilities. However, long before man first disembarks on the lunar surface, satellites will be used operationally in the everyday conduct of our business.

Applications at hand. One of the most promising applications of satellites appears to be in the communications field. Capacities of international teleradio and cable systems are severely burdened today and will be exceeded by the demands of tomorrow. At present television cannot be transmitted directly more than two or three hundred miles. However, the usable radio spectrum of frequencies above twenty megacycles (whose range is limited to line-of-sight) offers almost unlimited band-width space. Ground-based microwave relay links and coaxial cables are employed to overcome the range limitation, but for overseas communications they are impracticable, unreliable, or prohibitively expensive. Such prototypes as NASA's Project Echo have demonstrated conclusively that satellites can be used as communications relays or reflectors to extend line-of-sight transmissions to intercontinental ranges. Satellites can provide tremendous band-width capacity to meet the fast-growing need for teleradio communications. Their use will also permit rapid, voluminous transmission of scientific data to the electronic computers that are playing more and more significant roles in the workings of government, science, and industry.

NASA is developing meteorological satellites to provide world-wide observation of atmospheric elements—the data which meteorologists must have to understand atmospheric processes and to predict the weather. Tiros I, launched April 1,

1960, was the first step toward an operational meteorological satellite system. The highly successful 270-pound first Tiros satellite, orbiting at altitudes averaging 450 miles, transmitted 22,952 television pictures of the earth's cloud patterns. This gave meteorologists unprecedented opportunity to relate the earth's cloud cover to weather observation from the ground. Tiros II was launched November 23, 1960, and is providing useful television pictures as well as infrared heat measurements of the earth.

The U.S. Weather Bureau and cooperating meteorological groups within the Department of Defense will be analyzing Tiros data for months to come. Already this data has made important contributions to meteorological research. For example, Tiros transmitted pictures of cyclonic storms whose spiral bands were more than 1000 miles in diameter. The frequency and extent of highly organized cloud systems associated with these vortices were not fully realized before Tiros. Other pictures indicated the presence of jet streams, regions of moist and dry air, thunderstorms, fronts, and many other meteorological phenomena. Use of satellites of the Tiros type can greatly increase the accuracy of weather forecasting, particularly since they can report information from areas such as those over the oceans where it is difficult to obtain data by orthodox means.

Development of New Scientific Concepts and Technology

NASA provides the means by which university scientists can test their ideas and theories. Some of the most important space programs have sprung from ideas generated in this fashion. In addition, the NASA scientific advisory committees are staffed in large part by an outstandingly capable group of university professors and researchers, and many of the NASA research projects and experimental programs are carried out under contract by university groups.

Within NASA, in the flow of information and material in the development of a new concept in space science, the idea or hypothesis is often suggested by a scientist as a result of his background of research and specialized knowledge. The proposal is then subjected to a careful scrutiny by an appropriate group, including experts from the various scientific and technological disciplines, often in the form of NASA scientific advisory committees. Once the objectives and the experimental approach have been thoroughly established, a project is initiated. Representatives from universities, government laboratories, and industry contribute to the design and laboratory perfection of the equipment and techniques for implementation of the experiment. Specifications for launch vehicles, spacecraft, and the necessary ground support and communication equipment are evolved. The necessary system components are procured or custom manufactured in accordance with operational plans. A flight operation is conducted to gather the data needed. Suitable data processing is called out to provide experimental results in a form capable of comparison with the original idea or hypothesis. This comparison may justify the original idea, or it may lead to acceptance in principle but modification in detail, or it may completely disqualify the concept.

Some concepts can be tested in conjunction with existing programs and the results achieved relatively quickly and at moderate expense. Other are much

more difficult and may require specially designed space vehicles traveling in unusual orbits. Several years may elapse between the suggestion of the idea and the availability of the relevant information from space flight research.

The human intellect is a common denominator required in the development of all concepts and techniques. Man has unusual breadth of data processing; that is, he can analyze many different types of information. He has the ability to recognize important information from complex inputs often containing large amounts of irrelevant data. Man can store a vast amount of data per unit volume by digital computer standards, and he can program and utilize these data in an extremely flexible fashion. He has the ability to reach a judgment on the basis of partial information, and when a course of action must be selected, he can translate his judgment into decisions.

Unfortunately, even as a machine, man has limitations. His visual and aural senses are limited to a narrow band-width. His senses often induce errors and bias into the information stored in his brain. Even under optimum conditions, the time from perception to action has a minimum value, called the reaction time, that is relatively large. His ability to make judgments and decisions is extended in time and degraded in performance by fatigue, boredom, and emotional stresses. Ultimately when subjected to vigorous environmental conditions such as excess force, man may lose and never regain his ability to utilize his wonderful data processing system.

Man's machines and scientific equipment are but extensions of his physical and perceptual capabilities. Accordingly, *there is no such thing as an "unmanned space flight experiment."* To be sure, there are a number of spacecraft in being and planned which will have no human occupant, but these are designed to gather information for, be controlled by, or to perform in response to man's desires. On the surface this statement may appear to be an obvious truth. Nonetheless, it is of great importance to the success of all space exploration. The reason is not complicated; human beings must obtain information from and transmit information to the equipment on board vehicles whether the vehicle is manned or not.

The question that must be answered, then, is: Where and in what capacity can men contribute best to the over-all efficiency of each space flight system or experiment? Two fundamental points bear on the rational solution to this question: 1) to become knowledge, the information gathered must be linked with human brains; and 2) distance, intervening atmospheres, and matter such as dust particles, and meteoroids, attenuate the fundamental availability of information transmitted through space. If a large amount of detail information is needed per unit time, it then becomes necessary that a human brain be correspondingly closer to the source of information. If time and detail knowledge are less important, varying types of remotely controlled systems are useful. Also when large distances are involved with remote experimental devices, it is impossible to take action on information generated between the time a signal is transmitted from a device and a return response reaches the remote device. For example, the round-trip time for a signal from the earth to the moon is 2.6 seconds, from the earth to Venus, 356 seconds.

Propulsion has long held the center of the stage as the limiting challenge in space flight. In a practical sense, of course, propulsion will still remain for some

time as the limiting technology. Research progress, on the other hand, is illuminating potential methods for carrying large payloads great distances. Ultimately the linkage of information to the human intellect is the most critical problem. Little value will be gained from highly sophisticated space vehicle systems unless the same degree of progress is made in linking information from these systems to the scientific investigations.

An example of a problem in recognition is graphical data received from radiation-measuring equipment aboard a satellite vehicle. It is exceedingly time consuming and difficult for even the best-trained scientists to directly interpret these data. On the other hand, a pictorial presentation of the Van Allen radiation belts can convey a great deal of information to even an untrained individual. The utilization of such concepts with advanced data gathering, computing and display techniques shows great promise of accelerating the rate at which data can be gathered and displayed in a manner conducive to rapid assimilation as human knowledge.

Hence, it appears that the effective and timely exploration of space will require both remotely controlled and directly manned vehicles. Electric instruments designed for our satellite and space probes can perform many intricate tasks of sensing and measuring. However, these apparatus can only perform as programmed since instruments have no flexibility to meet unforeseen situations. Scientific data acquired in space by mechanical means must be balanced by on-the-spot human senses, reasoning, and judgment.

Our Evolving Concept of the Solar System

Space research is a vigorously expanding field, whose growth is comparable to the development of nuclear physics after World War II. It is a field which cuts across the established areas of astronomy and physics and the earth sciences, and draws together scientists of varied backgrounds. The close interaction and exchange of ideas among scientists from many different fields have proven to be highly stimulating. Individuals from physics, geophysics, and astronomy have joined in attacking some of the most fascinating and significant problems to be found in modern research.

These are problems related to the manner in which the sun controls the atmosphere of the earth; to the structure of the earth, the moon, and the other bodies in the solar system; to the origin and history of the solar system; and to the structure and evolution of stars and galaxies. The scientists who work together on these investigations are united by their common interest in the world around them —the earth, its atmosphere, the solar system, the stars and galaxies. This is the spirit of the new science—an emphasis on the exploration of our environment.

The great volume of U.S. research in space science—approximately 120 space research articles published in a single U.S. journal, the *Journal of Geophysical Research*, during 1960—demonstrates the interest which American scientists have developed in this area. This high level of activity is associated with rockets which can for the first time send major instruments, weighing several hundred pounds, into orbit above the atmosphere or out into interplanetary space. These rockets have opened up new avenues of attack on many important problems.

Vital data are flowing into astronomy and the earth sciences and revolutionizing these traditional disciplines.

The tools of the space age are: sounding rockets, satellites (orbiting geophysical observatories, orbiting solar observatories, and orbiting astronomical observatories), deep space probes, and instruments landed on moon or planets. The sounding rockets, satellites, and deep space probes complement each other in providing the data for progress in space research. In the long run the moon and planets themselves will serve as deep space observatories.

Two problems provide particularly important examples of the unique contributions which space flight vehicles can make to the solution of fundamental scientific problems, and of the reasons for the great interest of the scientific community in this area. The first of these problems is the origin and history of the solar system. We know that the solar system was formed about 4.5 billion years ago, but we do not know how it was formed, and this problem has been the subject of much thought and speculation for centuries. The investigation of the origin of the solar system by instruments carried to the moon and planets in space flight vehicles is a project of the greatest scientific importance and general interest.

The moon will play a special role in this investigation because it is a body whose surface has preserved the record of its history for a much longer period than the earth, and probably much longer than Mars and Venus as well. On the earth, the atmosphere and the oceans wear away surface features in ten to fifty million years. Mountain-building activity turns over large areas of the surface in about the same time. There is little left on the surface of the earth of the features that existed several hundred million years ago. The same is probably true of Mars and Venus. But on the moon there exist no oceans and very little atmosphere to destroy the surface. Also, inspection of the moon's surface in a telescope shows few signs of the mountain-building activity which distorts and replaces the surface of the earth so rapidly.

Thus the moon's surface will carry us back very far into the early history of the solar system, perhaps not back to the birth of the sun and planets, but certainly billions of years back—much longer than the ten to twenty million years to which we are limited on the earth. Not only the lunar surface, but also the internal structure of the moon may provide a clue to the early history of the solar system and the birth of the planets.

One of the theories for the creation of the planets, popular until recent times, held that the solar system was created during a near collision between our sun and another star, in which the gravitational forces between these two massive bodies tore huge streams of flaming gas out of each. As the intruding star receded, the masses of gas which happened to be near the sun were captured by it into orbits in which they eventually cooled and solidified to form the planets. If such a collision was the manner of formation of the solar system, then the moon and planets must have been molten at an earlier stage in their histories. In that event, the iron in their interiors would melt and run to the center to form a dense core.

Another theory holds that the planets were formed out of pockets of condensation in the dust surrounding our sun during the early stages of its lifetime. We know that stars themselves are almost certainly formed in this way, by condensation of pockets of interstellar gas and dust which happened to be somewhat denser than their surroundings. It seems likely that additional subcondensations

could have developed in the tenuous matter surrounding the sun before the central condensation had proceeded to its final stages; and that the moon and planets were eventually formed from these subcondensations.

Large bodies like the earth have enough radioactive uranium inside them to produce melting of iron simply through the heat generated in nuclear decays. Therefore, the existence of a dense core of iron in the interior of the earth does not prove the validity of the collision theory, nor disprove the condensation theory. However, the moon is smaller and colder and will provide a much better indication than the earth as to which of the two theories on the origin of the solar system is correct.

The first major project in our program of lunar and planetary exploration will include instruments designed specifically to obtain information on the internal structure of the moon. This is the Ranger series of spacecraft, which will contain gamma ray detectors for measuring the level of radioactivity in the lunar surface, as the spacecraft approaches the moon. The spacecraft will also contain a seismometer, or earthquake measuring instrument, which will be detached from the main body of the spacecraft at some distance above the moon's surface, and slowed down by the firing of retrorockets as it approaches the surface so that it can land with a sufficiently moderate jolt to permit it to function after impact. Attached to the seismometer will be a radio beacon which will transmit back to earth, if the instrument functions as planned, the data received by the seismometer on the level of earthquake or "moonquake" activity. The analysis of such seismometer records on earth has yielded most of our information regarding the internal structure of the earth, and it is hoped that the instrument will give us basic information on the internal structure of the moon. This same Ranger spacecraft will also contain a TV system designed to transmit images of the moon's surface features back to the earth with a degree of detail hundreds of times greater than we can obtain from our best earth telescopes.

A second problem of great importance in the space science program is the study of the control exerted by the sun over events on the earth. Most of the energy emitted by the sun falls in the visible region, and is transmitted to the ground and to the lower atmosphere, where a part is absorbed and part is radiated back into space. Variations in this process of absorption of visible light produce an uneven heating of the lower atmosphere, leading to winds and other weather activity. Predicting the response of the atmosphere to this local heating is the basic problem of meteorology.

The visible light which produces the heating does not vary appreciably with time, as far as we know. However, one very small part of the sun's energy output does undergo violent fluctuations. This part comprises the gusts of X rays, ultraviolet light, and charged particles which are emitted from the sun at times when its surface is unusually turbulent. We know that the surface of the sun boils and bubbles in an active manner, and sometimes ejects such clouds of charged particles and streams of radiation into the space between the sun and the planets.

These solar eruptions are known as flares. Their appearance marks what may be called a storm on the surface of the sun. By analogy with the earth we refer to flare activity as solar "weather." When a flare is situated in the right position on the sun's surface, the clouds of charged particles are ejected in such a direc-

tion that they reach the earth and interact with its atmosphere. The energy carried by these particles averages less than one millionth of the energy in the visible light, and its effects are usually not noticed by the man in the street. However, they can be very important. They produce communications blackouts and disturbances, magnetic storms, and auroral displays. They also produce violent changes in the intensity of the Van Allen radiation, which are apparently related, in a manner not yet clearly understood, to the other effects that accompany solar activity (although the information obtained from the Explorer satellites in the last year suggests that these belts may have the function of a storage bin, in which solar energy is trapped for a time, before it is released to the atmosphere).

The entire matter of sun-earth relations, including the formation of the Van Allen belts and their possible role in geophysical phenomena, constitutes a relatively new area of research in each of the sciences. It is an area which was greatly stimulated by the discovery of the Van Allen belts during the International Geophysical Year, which is at the moment perhaps the most exciting and fruitful field of research in the space science program.

During 1960, a tremendous amount of data pertaining to this problem were accumulated from sounding rockets, satellites, and deep space probes. Explorer VI showed that the radiation belt lost particles at exactly the same time that an aurora was observed beneath it. Explorer VII provided an observation of radiation belt activity correlated with a red auroral arc over Colorado. During the summer nuclear emulsions were fired into the lower Van Allen Belt from the Pacific Missile Range. The vehicle was designated NERV, which stands for Nuclear Emulsion Recovery Vehicle. The exposed emulsions were recovered, after the flight, from the Pacific Ocean, by a U.S. Navy vessel. The data contained in the emulsions are still undergoing analysis. However, they have already revealed that at the lower energies there are many more protons in the lower Van Allen Belt than previous observations of the higher energy protons had seemed to indicate.

The addition of these results to the data from the flare of November 1960, and from another unusually violent solar flare which occurred at the end of March 1960, has given us our first understanding of the sequence of events during and after one of these flares, and the way in which they produce effects on earth.

In the period March 30 to April 1, 1960, there occurred a major solar storm consisting of two major flares. The study of this storm has been especially valuable because at the time it occurred both Pioneer V and Explorer VII were out in space and equipped with instruments designed to detect the effects of the consequences of such a great solar event. At that time, Pioneer V was three million miles from the earth, and Explorer VII was orbiting the earth at an average altitude of about 800 miles above the surface. Following the first flare, Pioneer V radioed back to earth information indicating that its instruments had detected the passage of a cloud of relatively slow-moving particles en route from the sun to the earth. Explorer VII detected the effect of the same particles on the radiation belts near the earth a short time later. The effect of the particles from this flare was observed on the surface of the earth in the form of a magnetic storm and other disturbances. The magnetic storm began about a day after the commencement of the flare, indicating that the particle cloud traveled at a speed of about 1000 miles per second.

On the morning of April 1, a second major flare occurred in which a cloud of slow-moving particles was again emitted. However, this flare, unlike the previous one, also produced a burst of extremely energetic particles, which reached the earth only one hour after the commencement of the flare. Their arrival was indicated by an anomalous absorption of radio waves in the Arctic ionosphere, which was reported by Leinbach at the University of Alaska.

The passage of these fast particles across the interplanetary space was also indicated by Pioneer V, which contained special counters designed by Simpson of Chicago for the detection of such energetic particles. These energetic particles reached the earth by traversing the region filled with the plasma cloud and magnetic fields ejected in the first flare. The circumstances of their arrival near the earth have, therefore, provided us with some clues to the state of the interplanetary medium at the time of the flare.

A fascinating picture resulted from the combined interpretation of these measurements with the particle data and magnetic field measurements sent back by Pioneer V. It appears that under normal conditions the interplanetary space consists of a low concentration of extremely slow-moving electrons and protons, perhaps 100 of these per cubic inch, and a still smaller number of very energetic cosmic rays, normally less than one such energetic particle per cubic yard. There is also a small interplanetary magnetic field, approximately 2×10^{-5} gauss in magnitude, or 1/10,000th the strength of the earth's magnetic field. When the solar flares of March 1960 and November 1960 occurred, our analysis of space flight data shows that a tongue of plasma, that is, relatively slow-moving charged particles, erupted from the surface of the sun at the site of the flare, and moved out across interplanetary space at a speed of about 1000 miles per second. At this rate it took the plasma cloud about one day to reach the earth. The cloud dragged with it lines of solar magnetic force, which were frozen into the cloud and forced to move with it by the laws of electromagnetism. These lines of magnetic force had their roots on the surface of the sun in the vicinity of the flare, but as the plasma tongue moved across space, they were drawn out with it like loops of taffy.

When magnetic force lines become distended in this manner, they lose their strength, and by the time these reached the earth they were some 500 times weaker than they were at the surface of the sun. However, the magnetic field within the plasma tongue was still sufficiently strong to screen the earth partially from the cosmic rays which normally bombard it. The screening effect is called the Forbush decrease after Forbush of Carnegie Institute, who discovered it about twenty years ago. During the solar events of March and November 1960, the Forbush decrease was observed simultaneously on the earth and in distant satellites and space probes, and the magnetic field variations in interplanetary space were also observed at the same time. By combining these observations, in space and on the earth, we were able to determine the cause of the Forbush decrease, and to construct this picture of the process of solar eruption following flares. This is a major step forward in the understanding of sun-earth relationships, and one which represents, better than any other single project at the present time, the rapid progress which space flight vehicles can bring to scientific research.

Technology for Manned Exploration of Space

Development of the necessary advanced technology for space exploration does not require a new breed of men, nor does it require a new set of scientific and engineering fundamentals. It does require, however, that our engineers acquire an education of depth and breadth in these fundamentals, and that they be taught how to apply them to problems having little precedence in our engineering experiences. The keynote must be ingenuity, imagination, and adaptability. In addition, each space project is a major organizational undertaking. The successful engineer-scientist must not neglect the acquisition of sound business management fundamentals in his training. Because of the international consciousness toward space exploration, he must absorb enough of the humanities to become an understanding and responsive member of world society.

We ask a very great deal of our engineers entering this field, and of those who train them. For example, the development of the Mercury vehicle from an idea to a tested system with reliability satisfactory for manned flight involves a process of design, fabrication, and testing similar to the procedure for the evolution of a new scientific concept. The decision, in 1958, to place a man in orbit led to the preliminary design of a system consisting of boosters, launch complexes, capsules, ground tracking and telemetry stations, and recovery facilities. The equipment was designed, fabricated, and tested first on the ground and then in flight. Data gathered in the flights was processed, and either confirmed or denied the design adequacy. In some cases, the design was marginal or inadequate in some detail and changes in design were introduced. The development of the system is then a step-by-step process starting with the gathering of performance data on some part of the system under particular conditions and proceeding to utilize more and more of the system under a wider variety of conditions until the Mercury capsule has been successfully returned from orbit.

Impact of the National Space Program on Educational Institutions

The pace of our space program cannot continue, much less accelerate, without the enthusiastic support of the country's educational institutions at the elementary, secondary, undergraduate, and graduate levels. The program requires the direct involvement of many highly qualified scientists, engineers, and technicians who understand how to act to accomplish the desired goals. It also requires an understanding of our objectives and their implications by the nontechnically oriented citizens of the country. We do not expect our schools, colleges, and universities to produce for us a specially educated and trained "space scientist or space engineer." We do not want to exploit so-called space science at the expense of weakening our national efforts in other scientific endeavors. The national program embracing space exploration and the associated technology is and should continue to be a part of a balanced national effort in *all science* and *technology*.

Most students entering college are not headed toward careers in science or engineering. Nevertheless, they should all acquire background and knowledge which will prepare them to cope adequately with the technological advancements of our times. These nonscience oriented students may not need the highly specialized knowledge required by the professional scientist, but they should have a comprehending knowledge of science and mathematics. The liberal arts faculties have a great opportunity to help the undergraduate to achieve basic understandings of scientific principles, methods, terminology, and the place of science in modern life. This is a most difficult objective, but science, properly presented, can be made a living part of a liberal education. Science discussions can be enhanced by capitalizing upon the natural interest of most persons in the challenges of the times—for example, the exploration of space.

This fits well with one of the goals announced by the President's Science Advisory Committee in a report dated May 24, 1959. This report states: "We should improve scientific education at all levels, attempting to give better understanding of science to the nonscientist as well as to discover and stimulate more individuals who have the talent to become scientists and engineers."

At the undergraduate level, there is a minority who have the capability to become scientists and engineers. We in NASA have a natural special interest in these men and women, and for obvious reasons. The student scientist seeks to extend the boundaries of knowledge in his chosen field or special area of interest. Here again, as in the case of the nonscientist, the incorporation of space science elements into the regular course work can be effected without weakening the basic subject-matter teaching. Rather, this is a strengthening process because of the stimulation and motivation which can and often does result. A desire to participate in such advanced programs of scientific research may well provide the motivation and sustaining force for young Americans to undertake the long hours and hard work required to master physics, mathematics, biology, and chemistry.

Just as the nonscientist student should have a basic understanding and appreciation of science and technology as they affect society, so should the science major develop an appreciation for the arts and humanities. Rigid concentration within any field of study tends to deprive a student of understandings he requires for life as a citizen, as a parent, and as a person.

The education of the engineer is similar to but not identical to that of the scientist. The engineer derives from fundamental science the principles and the analytical tools which permit him to design a new product or system. The engineer must become familiar with fabrication and testing procedures resulting from his designs. In addition, since many engineering projects require the utilization of extensive resources and large numbers of people, the engineer must concentrate more heavily than the scientist on administrative matters and must be prepared to perform his duties as a member of a closely integrated team.

The emphasis being placed on advanced study by college graduates is heartening, for the need for graduate education in science and technology is real indeed. There the student comes face to face with the border line between the known and unknown. There he acquires the final preparation for a career in advanced research in science and in engineering developments. The President's Science

Advisory Committee, in a statement dated November 15, 1960, reported that "basic research and graduate education go best together. . . . While the great teacher of graduate students is almost invariably a research man too, there are many notable scientists who have as little as possible to do with teaching. First-rate industrial and governmental laboratories with commitments to specific programs are necessarily separated in some measure from teaching of a conventional sort. Thus, basic research can be and is carried on without much connection to graduate education. . . . *Yet in the long run it is dangerous to separate research in any field entirely from education.* . . . Where basic research is done separately, a special effort should be made to take advantage of its educational value."

This process of scientific inquiry can be developed best by connecting research activities and classroom teaching wherever possible. This, of course, poses a problem. A university which receives a grant or a contract from industry or government often assigns the research project to eminent and capable research scientists who occupy themselves fully in trying to achieve the desired technical results. This leads to little or no time for teaching.

Conversely, universities often budget faculty assignments with little extra time available. The President's Science Advisory Committee commented in this respect as follows: "In all but a few universities the standard 'teaching load' is such as to make it difficult for him (the professor) to carry on any serious program of investigation of his own. On the other hand, the university itself sometimes allows favored individuals to play no teaching role whatever, as a means perhaps of attracting and keeping men of particularly outstanding reputation. The danger in such a practice is obvious. . . . What is essential is that the environment as a whole should be an environment of learning, investigation, and teaching . . . all together."

The Honorable Robert S. McNamara, our new Secretary of Defense and former president of the Ford Corporation, served on the Harvard faculty for six years, and still talks with nostalgia of his life as a professor. He said recently, "In a sense, it takes more energy to be a professor than to be a businessman. Inner drive, imagination, initiative—that's how I classify energy. You've got to have plenty of it *in order to be a good teacher.*"

NASA and the many research and development organizations working in this field require extremely high-grade scientific talent and engineering know-how. We look to the nation's educational institutions not only for educated personnel to man our programs but also to conduct research and advanced development as part of our space program. We currently have contracts or grants totalling more than $8 million with over sixty different universities for research and advanced development involving analytical and experimental studies. We are anxious to support research and engineering programs of this type which are related to the broad space effort. We know that university scientists will supply many of the ideas and important experiments to be conducted in space.

In addition, we look to qualified scientists and engineers in our colleges and universities for professional advice and counsel on knotty problems. Some thirty university faculty members are serving on NASA boards and committees in many specialized areas of scientific and technological endeavors. Many others are giving us valuable consultative services, and their universities are assisting in

projects through contractual relationships. The participation of university faculty members in our programs as consultants and as the directors of research projects conducted on contract permits the updating of course material in a timely fashion. This continual repreparation of texts and classroom presentations is extremely important in fields that are undergoing rapid change as is the case in space science and technology. This participation is mandatory if the universities are to stimulate and educate students for leading roles in the research and development of the next decades.

Elementary and secondary schoolteachers, too, will face classes of boys and girls who are already space conscious. They will wish to know more of the mysteries of outer space, and will in many cases bring into the classroom the headlines relative to space activities. Furthermore, children born just prior to the launching of Sputnik I will be embarked on careers in less than twenty years. Their childhood impressions of space and its implications will have strong effects on their career choices and adult attitudes toward space activities. For children, the new is more real, since there is less interpretive background to help define initial and spontaneous perceptions. Thus, they will consider ordinary what to us is major change. The colleges or departments of education which are training the future teachers of America, have a Space Age responsibility to equip them properly to deal with the young inquiring mind.

In this connection, we are making available materials to assist teachers in their space-related offerings. Many of our people are serving on educational committees and boards to help in curriculum developments designed for our age of science. Still others will take part in teacher workshops in aerospace education. We have established an educational service unit to assist educators to gain information from us which will help them and the general public to cope with their needs and problems.

Earl J. McGrath of Teachers College, Columbia, contends that the single most effective device for improving the quality of college teaching in recent years has been the workshop for in-service training. This device has given active teachers an opportunity to meet their colleagues from their own and other institutions in order to exchange experiences, to redesign their courses, and to modify their own teaching procedures. He states that "a variety of means are available through which college teachers can acquire and perfect the knowledge and skills of their calling. With each advance in competence . . . the profession of teaching will be elevated in public esteem and the entire enterprise of higher education will be commensurately benefited."

Our organization has been asked to participate in over twenty college workshops throughout the country during the summer of 1961, all of them placing some emphasis upon space science and exploration. We will assist with resource people, equipment, and teaching aids, since we feel that NASA has a responsibility to provide educational material wherever possible and to participate in teacher training programs. In addition, NASA must provide means for participation of university research teams in space programs and must enlist the support of qualified faculty and staff as consultants, advisers, and members of our technical advisory committees. Colleges and universities must support on-campus research, encourage participation of their key personnel in government activities, provide

time for their qualified personnel to develop new classroom material, and must ensure that teachers who are in the forefront of scientific and technological space programs have an opportunity to spend sufficient time with their students to truly educate and inspire.

Exploration of Space—A National Goal

President Kennedy has said: "Over the next generation, there is no challenge facing our country that is more urgent or significant than that of providing better university education to more of our citizens. But it is a challenge we must face today—not a generation from now. . . . We must have trained people—many trained people, their finest talents brought to the keenest edge. We must have not only scientists, mathematicians, and technicians. We must have people skilled in the humanities. For this is not only the age of the missile and space vehicle and thermonuclear power. This is the age that can become man's finest hour in his search for companionship and understanding and brotherhood."

Certainly, we all agree with this objective. The question arises whether the expansion of facilities, the addition of more scholarships, the introduction of new educational programs, important as they are, will suffice to implement these objectives. There is another all-important factor. There must be an inner desire on the part of our youth to fully utilize even the educational opportunities we have today. The feats of men are most potent in stimulating our youth to attain the heights of accomplishment for which education provides the capability.

These feats must be solid accomplishments of real and well-understood goals. What are the specific objectives of space exploration that satisfy this condition? It is imperative to continue our exciting scientific exploration of the atmosphere, the moon, the planets, the solar system, and the stars. It seems certain that the next decade will see general use of weather and communication satellites. Here virtually assured are early, practical, and extremely beneficial uses of space technology. These objectives represent great feats of science and engineering, but the greatest feat of all involves the orbiting of man himself in space. Manned flight in space is close. It must be remembered that man's entry into space is not a stunt, to be accomplished once, then discontinued. Rather, the program must broaden with new technology providing increasingly greater maneuverability and longer times of flight until man himself can explore the moon and planets.

The task of exploring space is one which will stretch the muscles and brains of men and women for years to come, providing a continuing long-term stimulant to our society. It will test to the utmost our powers to enlist the cooperation not only of teams of scientists and engineers but of every other element of our society. The magnitude of the task challenges the resources and cooperative will of all nations. We must all re-examine our habits of thought and action. We must use our insight and vision to guide our present decisions so that we can prepare our successors for the unfolding developments in the age of space exploration.

NOTE: This report was prepared by James E. Webb, Administrator, National Aeronautics and Space Administration; Robert C. Seamans, Jr., Associate Administrator, NASA; and Robert Jastrow, Chief, Theoretical Division, Goddard Space Flight Center, NASA. Mr. Webb had planned to help deliver the paper, but was unable to attend the conference.

SUMMARY and ANALYSTS' STATEMENTS

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Summary of the Discussion Groups

WILLIAM E. PORTER

Professor of Journalism
State University of Iowa

ALL GOOD MEETINGS HAVE A SPIRIT and somehow take on a shape. The shape may come from several things: from the fact that many different kinds of topics which are dissimilar in the beginning move toward certain overriding issues in the process of examination; from the fact that the sense of urgency can produce agreement on generalities in a hurry, in order that work in detail may proceed.

Much of the discussion at the Sixteenth National Conference on Higher Education of the Association for Higher Education had these qualities. There was a sense of urgency about jobs to be done in higher education, and an almost unspoken agreement about their importance. Issues which once were controversial enough to reduce education meetings to indignant clusters of closed minds were not only accepted, but taken as beginning points for the real discussion. There was no question, for example, that higher education in this country has a responsibility for assisting in the development of education in remote quarters of the world; no real question of the inevitability of a growing partnership between the federal government and higher education (but a great awareness of possible problems in the partnership); no question of a sharp need for improvement in teaching.

The theme of the conference was Goals for Higher Education in a Decade of Decision. Somehow the word "goals" in our society has taken on a quality of windblown abstraction, and appears almost exclusively in clichés; it's generally accompanied by vague friends such as "challenging." But goals, like theories, actually are pragmatic and practical things. They represent identifiable ends which can be approached by hardheaded means, and it is in this sense that this conference gave its constant attention to goals.

"The big question now," wrote one of the recorders when her discussion group concluded its work, "is not 'whether' but 'how.'" She happened to be talking about the upgrading of general education, but she also described an important element of the spirit of the conference. There was little evangelizing

of pet causes, and even less contention for contention's sake. This does not mean that all was bland harmony, but rather that the sense of involvement in critical issues pointed most discussions toward the issues at the center of the matter. And it is at the center that differences of opinion have the most meaning.

The account which follows here organizes the conference discussions into a half-dozen categories of admittedly rubbery dimensions. These are not official divisions; these categories do represent, however, the areas to which the talk tended—to which, indeed, most talk in education tends these days. The first is the most important.

The Institution and Its Students

There have been meetings about education in which students were never mentioned, and one of the most aged of academic wisecracks asserts that running a university would be a lot simpler if it weren't for the confounded young underfoot. The people who attend the Association for Higher Education meetings have never believed this, nor have they been able to keep a constant concern for the student from running throughout their discussions. Students as well as teachers and administrators have appeared as panelists; and this year's group of students made a particularly marked impression.

The talk centered around admission practices, the improvement of learning, and what might be described as the joys and pitfalls of youthful nonconformity. Three groups gave their attention, in one way or another, to the first of these—the problem of selecting and admitting students for higher education, and evaluation of methods used in the process.

It was agreed that more meaningful information must be made available to high school counselors who advise students about their potential for higher education, and that, while test scores are valuable predictors, test scores alone are not enough; face-to-face contact is needed. Better communication between high school and college at the administrative level also is necessary, particularly in regard to the functions which the college is trying to serve and its expectations of entering students. (California and Michigan, among state systems, were cited as providing especially good liaison.) The problem of matching the student to the school was seen as critically important, and the organization of a national committee for thorough study of the matter was suggested. The usual dilemma of the high school in trying to decide the extent to which its own purposes should be modified to train its students for college entrance examinations was raised and, as usual, not resolved. There not only was clear agreement about the overriding need for better linkage and better matching of the student to the institution, but a plea for an immediate assault upon the problem.

Two discussion groups directed their attention to the nonconformists, to the high schooler with indifferent performance because he was never challenged, and to those with specialized abilities. Both groups found themselves concentrating on "creativity" and spent relatively little time upon either the nonconformist per se or the student who never has been properly challenged intellectually. It was agreed that creativity needs encouragement, and that conventional grading systems and criteria for admission are hardly adequate (one dissenter suggested, however, that academic performance is the chief reason for college

attendance and that, while no harm might come from a transitory stay in college, the student who does not meet normal standards should expect to exit).

The group which was officially charged with examining the matter of the creative student went somewhat further. It established as a first goal the reconstruction of the educational process to encourage and reward independent thought and action, as well as intuitive perception. This clearly involves some reworking of the curriculum, with emphasis upon the structure of knowledge within fields and the intellectual bridges which connect fields. Such an approach also raises problems—the early identification and measurement of creative potential; the effect upon all students of such a reordering; the preparation of teachers. There was some feeling that there may be a certain amount of conflict between subject-matter competence and creativity, because conventional academic accomplishment and creative insight are not the same thing. But creativity is the rarer of these two, most participants agreed, and higher education needs to be more concerned with its development.

Although the creative student is sometimes controversial, the student who becomes deeply involved in controversial issues is not necessarily creative. He nevertheless is an important element in the university as a social institution, and one of the liveliest and most-discussed groups at the conference talked about him for a full day. Students, who were involved in this group's discussion, made an eloquent case for controversy with a purpose. From the beginning, the meeting worked on the assumption that denial of the right to discuss controversial issues was unwise; the more important questions were those of judgment and degree. It was agreed that violent emotional involvement was neither desirable nor effective, and that some controversies probably are more appropriate than others. Beyond that, there was amicable disagreement. Some of the students felt that it is possible, in effect, to draw a sharp distinction between the student on campus and off, and that his off-campus activities are his private business; some of the academicians disagreed, pointing out that in the public view he is a student as long as he is enrolled, and that the very fact of enrollment indicates an acceptance of college policies, although the student always is free to try to bring about an "orderly change" in policy. The question was raised of which comes first—academic progress or social action (not surprisingly, it remained unanswered, at least in terms of a consensus). It was pointed out that it is useful for an institution to develop consistent policies—but, as someone pointed out, "the formulation of a policy will not avoid controversy."

Perhaps most important in all this was the general agreement that controversial issues should not be regarded as automatically bad, and the succeeding agreements to disagree were amicable to the point of surprising some of the participants. Some of this amity may have grown out of the fact that the discussion was about controversy one step removed from the real thing; it seems sensible to assume, however, that it grows in larger part out of a growing sophistication among both teachers and students about controversy in a time in which the muscle tone of democracy must be maintained.

One discussion group was concerned with students who have great difficulty in securing admission to college because of membership in a minority and/or low

socioeconomic status. The group produced no recommendations for specific procedures, but re-emphasized the importance of seeking such students out and judging them by special standards. It was pointed out that these students normally receive the fewest scholarships, regardless of their capacities, and the creation of special government scholarships was mentioned as a possible solution to the problem. Some universities are quietly experimenting with special programs, and these were commended. Institutional initiative is probably the most effective way to improving educational opportunity, the group agreed.

The foreign student also represents a specialized case, and a panel concerned with improving foreign student opportunity and performance dealt with the matter in detail. A need for better assessment of prior educational experience, particularly in the English language, was pointed out, along with a need for reassessing the methods of testing and grading foreign students in American colleges. It was suggested that some curriculum revision also may be necessary, particularly to provide opportunity for improvement of the student's English. Specific recommendations were made that proficiency in English be given more attention in admitting foreign students; that special status, trial runs, and on-probation admissions be more commonly used; that consideration be given to sending foreign undergraduate degree candidates to small colleges during the first two years, with opportunity for transfer to larger institutions later.

The foreign student was seen as requiring, and certainly deserving, special treatment—but, it was emphasized, this does not go as far as giving him a break in evaluating his performance. Finally, there was an energetic recommendation that college staff members become better informed about the aids and resources available through such agencies as the National Association of Foreign Student Advisers, the Institute of International Education, the International Cooperation Administration—and that educators remember that in improving the lot of the foreign student they affect the entire atmosphere of learning.

The Institution and Its Faculty

If there's an old faculty wheeze to the effect that teaching would be a pleasant life if it weren't for the students, there must be an even older one among students which keeps the principle but reverses the roles. The projections of future needs and supplies of college teachers hint that students may well be able to try out this hypothesis within a few years unless more attention is given to the recruiting and training of teachers and the appropriate gratifications of those already in the profession.

The panel on early identification and encouragement of potential college teachers assumed that more intensive recruitment is necessary, and pointed out that other teachers, administrators, and educational associations have an obligation to work at it. The group agreed that hastily conceived crash programs probably will do little good, and commended the new Ford-supported three-year M.A. programs. There was a suggestion that the teaching experience begin as quickly as possible, even including, in some cases, the undergraduate years.

Other discussion groups examined the individual faculty member in the institutional context, attempting to define the responsibilities of both teacher and college in improving teaching ability and professional status. Various measure-

ment devices were discussed: "visitation" and other cooperative efforts, for example. It was suggested that the best measurement rests in the students who go ahead to do further good work. There was solid agreement, of course, that good teaching should be rewarded—in recognition, pay, careful tailoring of load (and a suggestion that a standard scale for measuring teaching load is necessary). The need for better formal programs for training college teachers was recognized, but without much hope of reversing the present trend toward discipline specialization, which makes the prospect of training in how to teach even more remote. It also was pointed out that students do a great deal of teaching of each other and that this fact, known by everybody, goes unstudied although it needs systematic attention and assistance.

There is more to good teaching than subject-matter competence and a reasonable work load, however; development of the proper atmosphere seems also to depend upon faculty involvement in the policy-making process (separate studies by Crawford and Medsker were cited). This atmosphere of simultaneous involvement and freedom contributes to good academic work in the minds of most of the group. There was a dissenting minority, however, and some suggestion that teaching benefits when administration applies some pressure.

Another circuit of the familiar problem of scholarship vs. classroom performance brought forth the familiar conclusion that the ideal teacher is a man who combines both, but that such individuals are rare and the institution in practice will have to strike a balance in which each man makes the most of his own strength. It was agreed that research should not be defined too narrowly, that promotion should not depend upon it primarily, and that it may conceivably have an undesirable effect on the curriculum—especially sponsored research.

The role of the faculty in institutional policy making was discussed by another group in a context quite different from that of the salutary effect of involvement upon the individual teacher. This discussion approached the matter from what might be roughly described as an institutional point of view. That there should be faculty participation was not contested; the issue was how to maintain and encourage such participation. Examples were offered of the failure of faculties to respond to the opportunity to take part in curriculum planning; others showed very creative participation. It was pointed out that the extent of participation often is conditioned by law, in the case of public institutions, or trustee action in private schools. It was agreed that there is a joint responsibility for policy formulation, under any circumstances, and that the problem may be big enough that it needs an attack on a nationwide basis similar to that employed in the revision of high school curricula in physics and mathematics. There was a general feeling that students should have some part in the process of policy making as well, but careful ground rules obviously are required, and these were not laid out.

The discussion group dealing with "Constructive ways in which the effectiveness and ethics of the academic market place can be improved" moved quickly to narrow this topic, and spent most of its time considering the hiring-quitting-firing relationship and the obligations on both sides. The issue of fulfillment of contract was discussed in particular detail; it was agreed that it is undesirable to hold a man to a contract he does not wish to fulfill even if it is legally possible

to require it; a halfhearted or deliberately low-level performance can do great damage. The need for better, and more open, information about the academic market place was cited; the group felt that this could be best done, however, through development of existing agencies (such as college placement services) rather than through creation of a new one. There was mild disagreement, at least, about such matters as turnover (some held that fairly rapid turnover is not necessarily a bad thing, pointing out that smaller institutions get the services of young men on the way up for a few years) and the importance of salary level in job changing.

The Institutions and the Curriculum

"Changing a curriculum," one of the members of a discussion group said, "is the same process as moving a cemetery." Perhaps nowhere in higher education is academic conservatism more steadily demonstrated than in the reluctance to tinker with established programs. Nevertheless, a sizeable number of discussion groups discuss curricular matters at national Association for Higher Education conferences; a total of eleven worked in the general area during this one.

The efforts of one group to set out insights from one kind of professional training which might apply to all other professional education produced a general examination of the interrelation of professional programs and the feeling of a need for more coordination in the future. It was agreed that the goal for all professional training must be the production of graduates who are both knowledgeable and competent. Certain elements in this training are common to all the professional disciplines—for example, ethics—and there are indications that a restructuring of traditional academic organization might be of great benefit (the University of Pittsburgh's plan was cited as an example). Such coordination also could help improve communication among professional disciplines, and the group felt this to be of importance. The relationship between such a division and the graduate school was not settled by the discussion; there was a considerable difference of opinion concerning the importance of the graduate school as a means of unification. Nor was there anything resembling total applause for current professional education; the group agreed, in particular, that the professions are not doing enough to develop adequate ethical standards.

Another discussion group directed its attention to the role of higher education in the development of effective certification standards. It concentrated on the question of approved programs and accreditation. About half the participants represented institutions with National Council for Accreditation of Teacher Education affiliation. There was considerable discussion of hazards in the approved program concept: that such programs may be tailored to the predilections of faculty members rather than the production of teachers, and that arts and sciences viewpoints may not be represented. There was no substantial agreement on the desirability of either the approved program approach or the necessity of national accreditation.

One discussion group dealt with the role of philosophy in general education programs, and produced lively but largely familiar argument which was summed up by one of the participants in this fashion: "Do we want to teach students

philosophy or teach them to philosophize?" It was pointed out that general education programs usually tend in the latter direction, and that in most such programs philosophy is used in a kind of "great books" approach.

The group concerned with updating general education courses in the natural sciences developed no central issue of debate, but did turn up a variety of problems. It was agreed that general education courses in this area should be *about* science, while the traditional departmental course is *in* science. Interdisciplinary planning was generally felt to be helpful, but not entirely necessary; the tailoring of the course to the needs of the program and the resources of the teacher probably is more important.

The updating of general education in another area—humanities and the fine arts—brought to another discussion a kind of corollary to problems of laboratory work in the general education courses in science. The analyst and many of the group felt that actual creative work in some of the art forms was essential to gain a real understanding of the creative process. Examples were given of the courses at the University of Minnesota, the University of South Florida, and Stetson University. Other members of the group disagreed with the usefulness of this approach, feeling that these courses should be devoted essentially to analytical content.

An "updating general education" panel directed its attention to the present state of general education courses in political science. Here, too, there was disagreement, but at a somewhat more abstract level; in particular, about whether social science is science at all, and about the main body of content in such courses. Part of the group felt that the scientific method which characterizes the physical sciences has such little relationship with social science, that the latter term should be abandoned; others argued that there are close similarities and that social scientists themselves tend to be self-depreciating. Much of the discussion about content centered on the relative value of the "historical" versus the "behavioral" approach. The group agreed that general education should not be left to one course on one level of a student's college experience, but that there should be a number of such courses on advancing levels. A clear need for solid administrative support of such programs also was emphasized.

The sense of these discussion groups, taken as a whole, is that general education is with us to stay and, indeed, needs elaboration and evangelism. One major discussion group did not begin with this premise, however. This section was somewhat anomalous in character; it consisted of an analyst who made a controversial presentation, then comment—largely critical—from twelve panelists. The audience was large, and there was, by design, relatively little general discussion. The topic was the future of undergraduate education and the analyst indicated his conviction, in short, that it deserved to have none. He called for a new approach to undergraduate education in which the split between general and special would be resolved in favor of a unified undergraduate program which would make no special effort to identify "general" or "specialized" content. The tone of the presentation was highly critical, not only of general education but of education in general for announcing unrealistic goals and then ignoring them in operation. The platoon of panelists for the most part sharply disagreed. They made these points: that the philosophy of general education is

flexible enough to accommodate many methods; that every institution should periodically review its programs to maintain their quality; that general education should permit and encourage students to move at their own pace, and can make provision for acceleration; and that the objectives of such programs should not be too florid. Obviously, a general education enterprise cannot hope to embrace the whole of knowledge. Within these limitations and with due attention to these cautions, the panelists in large part affirmed their belief in, and support for, general education programs.

The question of better curricular articulation between secondary and higher education is a familiar one in Association for Higher Education meetings; it was touched upon obliquely in many discussion groups at this one, and reference to it has been made elsewhere in this summary. The discussion group directly assigned to the topic heard a presentation of the College Entrance Examination Board's Advanced Placement Program and a commentary by the representative of a township high school–junior college system. The implications of the experience in advanced placement are clearly in the direction of better grouping of high school students at ability levels. It was suggested that the entire curriculum of the secondary schools could be upgraded by the introduction of such a program, and eventually the entire educational system of the country. The chief objective is for the student to acquire, while still in high school, the habits and thoughts of study which will serve him best in college, and this process is closely related to the extent to which the high school curriculum provides him with a challenge. It was opined that for the superior student grades 11-14 are often repetitious and all but wasted. The essential problem is not one of curricular articulation, in the eyes of this group, but of integrating individuals.

The relationship of this country with the rest of the world obviously is a matter of increasing moment, and much talk at the conference revolved around it. The implications of this increasing concern for the curriculum were examined by a discussion group which began with the assumption that the real objective should be the open, tough mind rather than a bland, superficial do-goodism. The group felt, most importantly, that the addition of courses per se should be kept to a minimum, and additions should be made with the understanding that other materials may have to be dropped. There was considerable belief that present course content often could be widened with equally good effect. It was pointed out that traditional American attitudes have been ethnocentric and Western-oriented ("The Greeks did not start everything," somebody said, "but we teach as if they did") and that fresh and more realistic viewpoints are needed.

The graduate curriculum, or one aspect of it, was examined by a discussion group concerned with the improvement of the M.A. degree as a means of preparing college teachers. This group spent much of its time discussing the experimental three-year M.A. programs. There was general agreement that this could be a most effective device if the people are carefully chosen, and there was strong endorsement of the spreading practice of connecting it with honors programs. The group also, and inevitably, found itself urging that the M.A. be given a higher status and that the present chaotic irregularities from institution to institution in the requirements for the degree be reduced. There was an in-

teresting suggestion that the academic designation "Cand. Ph.D." be recognized for people who have completed course work for the Ph.D. but have not yet finished the thesis. It also was agreed that there is great need for more instruction in how to teach at the college level, and the programs at the University of Missouri and the University of Michigan were mentioned. Special training for junior college teachers—M.A. plus certification—was described in operation at San Francisco State College. The group clearly felt that the Ph.D. still is the best preparation for college teaching, particularly if the program includes courses in how to teach, but urged higher status and more thorough development for the M.A.

Because the curriculum is the basic element of the education process, it obviously reflects social pressures; indeed, it must, if education is not to be completely removed from reality. One of the discussion groups devoted its examination to these pressures upon the curriculum from many sources—business interests, government, international affairs, the requirements for entrance into graduate study. A clear consensus developed that each institution must, in effect, provide its own defenses, and that it can do this best by conscientiously working out—and making clear to its constituency—its institutional objectives. Clear conceptions of what the institution is and what it is trying to do are the best device for judging the desirability of major changes in the curriculum, and the best protection against subtle corruption, it was agreed.

The Institution as an Organization

Three discussion groups—the largest number for any single, specific topic—were devoted to the subject of year-round operation on the trimester or quarter plan. These differed somewhat in character from many of the other discussion sections in tending toward the "information session" pattern. The analyst's paper set forth in some detail the operation of the University of Pittsburgh's trimester plan, and much of the discussion in all three sections concerned this particular scheme; the more familiar quarterly organization of the calendar received minor attention.

The advantages of the trimester system, which calls for three calendar periods of equal length and full-scale standard programs with a month's vacation after the third period, are chiefly those of fuller utilization of physical facilities, increased faculty earnings, and a sharp stepping-up of the speed of the student's academic progress. Since each trimester is equivalent to a normal semester, the normal bachelor's degree can be obtained in two and two-thirds years and the doctorate in about five. Advocates of this method point out that it not only has these obvious advantages, but speak also of their conviction that the student's time—and mind—are better utilized.

Those who opposed the proposal claimed that this kind of progression was too rapid, too exhausting both for teachers and for students, and that breaks of relatively long duration at reasonably frequent intervals are essential to the best learning and teaching. Neither side has much evidence as yet; favorable reactions were reported from the University of Pittsburgh and Kalamazoo College, but there was a report of an increase in student failures in New York University under a variant of this system.

Another topic which involved two discussion groups also functioned primarily as an information session. The topic was "Describing, evaluating, and improving the total climate or profile of a campus—physical, intellectual, social, and spiritual." The analyst's paper discussed a complex measuring device, based in part upon interviews, and called the College Characteristics Index. This generated lively interest and considerable questioning for the sake of further information, but little evaluation or examination because of both the newness of the concept and the complexity of the device.

One discussion group was concerned with the methods of evaluating programs in small colleges and developing long-range plans for institutions with limited resources. This group agreed that every college should have a well-developed long-range plan, consistent with its educational objectives, for the expansion and improvement of its plant, the strengthening of its financial position, and the improvement of its academic program. This can be started within the college and should involve its trustees, administration, faculty, and students; outside consultants can be a help, but were not seen as essential. Although each college's plan obviously must be shaped to its needs, the group did suggest these important marks of a good small college operation: strong presidential leadership with well-defined objectives; an effective board of trustees committed to the main purpose of the college, educated in its understanding of that purpose by the president; the right students, carefully selected in terms of both their own and the college's welfare.

The question of the relationships between institutions of higher education and their various governing boards received the attention of another discussion group. Their discussions turned around the problems related to the responsibilities of boards of control, state planning boards, activities of state budget officers and auditors, and the changing relative enrollments of private and public institutions. They agreed strongly upon the need for unified action on the part of all higher education in the face of mounting cross pressures, with freedom of both inquiry and teaching the first concern. It also was pointed out that education must be completely candid and forthright in its accountability, especially in respect to public monies.

Forthright accountability in regard to money matters requires, in addition to certain matters of the spirit, good bookkeeping. Some leaders in higher education have looked longingly at the apparent efficiency of business practices of management, and one of the discussion groups dealt with goals and techniques of business, industry, and government which might be applicable to the administration of higher education. The analyst indicated several specific approaches to problems, stressing their fundamental importance as ways of going at things rather than as "techniques"; chief among these was the necessity for the review and definition of objectives. It was suggested that corporation practice in selecting, training, promoting, and evaluating administrative personnel was superior to those of higher education. There also was a strong consensus that each institution should undertake both costs analysis and space utilization studies; knowledgeability in these fields has increased greatly, and an institution will ignore them at its peril.

Financial analysis and its relation to budgetary planning engaged another discussion group, which began with the premise that systematic analysis is of critical importance. Many areas which need such systematized study were indicated, including general administrative costs, maintenance cost, libraries, faculty salaries, and teaching loads. The group agreed that the institution must first determine its goals and then develop normative data without waiting for outside pressures (legislatures, state government) to force the process. There was considerable attention given to instructional costs, without clear agreement on any one "best" method.

Another discussion group considered the most effective forms of interinstitutional cooperation. The analyst pointed out that cooperative effort can provide excellent results in a wide range of management fields—fund raising, purchasing, research installations, libraries—in addition to the academic program. It was agreed that clear institutional objectives are the first step and that periodic evaluation in light of those objectives is essential. There clearly is need for more knowledge about what actually is being done, and for more earnest examination of the possibilities. It was pointed out, for example, that students and teachers in the sciences need more contact with expensive equipment which only the best laboratories possess, and that cooperative schemes could greatly enlarge the opportunity.

The discussion group which devoted itself to intercollegiate athletics cheerfully agreed that it had little new to say; that the problems were still the same, the solutions not in sight. "It's much like the Ten Commandments," one participant pointed out, "they've been written, they are understood, but living them is another matter." Among the problems cited were those of excessive recruiting, the decline of faculty control, overcommercialization, and administrative timidity. The group agreed that these things can and should be corrected, pointing out that many excellent analyses have been made without producing much effect (the American Council on Education's report of 1952 was cited, as was the National Collegiate Athletic Association's code). In sum, the group felt that real change must be brought about by faculties and top administration; there are few sources of leverage elsewhere.

Ways in which higher education can better inform the public of its goals, values, needs, and opportunities were discussed by one group. Operationally speaking, this topic is public relations. It was pointed out that institutions of higher education can expect to come under closer questioning than ever before, and that some traditional attitudes within the profession—administrative hypercaution, faculty preoccupation with specialization—can do even more damage in the future. It was agreed that the institution, first of all, needs to define its objectives and then identify its publics. It cannot, even if it wishes to, reach everybody; "the public" as a mass is a myth. The institution must remember that action, rather than manifestoes, is what makes an impression—The University of Chicago, through abolishing big-time intercollegiate athletics, really showed its publics where its values were placed. It was pointed out that public relations cannot convince the world that a poor institution is a good one, and that the art cannot be practiced in a social vacuum.

The Institution and the Society It Serves

All of the conference's discussion groups, in effect, were concerned with higher education and society. But certain of the groups worked in a direct social—or societal—context.

One of these groups dealt with the implications for higher education of the rapid urbanization and industrialization of American society. The analyst pointed out that this vast social process requires changes in teaching, reassessment of values, new and better methods of gathering information, and new viewpoints on financial matters. Someone offered the hope that today's universities can do for the new urban life what the land-grant colleges did for the rural society. The first step in that attempt, the group agreed, must consist of a more coherent view of the meaning of urbanization and the teaching of that view in college classrooms. Such teaching must emphasize the sense of historical movement and the necessity of extending, not restricting, opportunity. Higher education must also help set the values and ideals of urban life and provide reinforcement for them.

An institution of obviously growing importance in an urbanized American society is the junior college. The discussion group concerned with trying to assess the future of these schools felt there was little point to much discussion of goals since they already are well known (interestingly enough, this group was one of the few which did not stress the importance of defining precise objectives; their concern, rather, was with trying to attain them). It was pointed out that junior colleges are committed to the "open door" policy, and thus provide a vital democratic function; at the same time, they provide terminal education for those who should not, in wisdom, proceed further. Despite these rather special characteristics, research on junior college students in Kansas, Texas, Florida, and California indicates that the student body tends to show a normal distribution of ability at all levels, and, of course, many go on to further degrees. Because of its many unique commitments (including a strong one to community service in a time of increasing leisure time), the junior college has particular need of good liaison—with high schools, with business and industry, and with four-year colleges—and good counseling. It must remain locally controlled, yet be oriented to a state system.

Another panel was devoted to the future of the church-related college. Participants included representatives of both the Catholic and Protestant faiths, which gave added significance to the discussions. The group found itself concerned about the problems of preserving freedom to choose among different types of institutions; the problem of maintaining the integrity of the church-related college as an educational enterprise; the problem of finding adequate support. It recommended, as a basic consideration, that church-related institutions identify and clearly interpret their role in education. The group consensus was that church-related institutions should share in any federal support of higher education, and that they should try to influence tax policy at the state level to open up the channels of private giving. The discussion repeatedly reflected a deep concern over maintenance of the right of the student to choose the kind of college he wishes to attend, and the right of the church-related institution to maintain its integrity in the face of pressure.

The Institution and the World It Serves

The conference was much concerned with the development of better international understanding, and succeeded in producing a maximum of pragmatic analysis and a minimum of high-flown talk. Discussion groups were concerned almost entirely with practical and workable proposals and pragmatic planning and, although the high motivations were present, no one was willing to settle simply for talking about them.

Some of the discussion groups in this category were concerned with proposals which were not only new, but still in the headlines. One discussion group was designed for the discussion of the Peace Corps program, an idea still more or less in the category of a campaign promise at the time the conference program was drawn up. By the time the conference met, the Peace Corps had been established by Presidential order, and the analyst who had been long scheduled to make the basic presentation had been named as one of the executives of the actual program. The discussion indicated considerable concern on the part of the participants about the still undefined relationship between the federal government and the institutions which presumably would be involved in the Peace Corps training program. It was agreed that cooperating institutions should have a major voice in the administration of their part of the program, in the selection of personnel, and in the research and evaluation which was seen from the beginning as a key part of the program. This was not simply another expression of the too-familiar lines of "give us the money, and then leave us alone"; there was a clear commitment to full partnership in the enterprise, but the institutions represented were concerned that their resources be used as effectively as possible. Partial results of an American Council on Education survey were reported which indicated a high level of interest on the part of many institutions.

Few doubts were expressed in the meeting about the wisdom of the concept, but the problem of selecting the right persons to go overseas obviously was seen as having major dimensions. Many questions in detail which were asked were as yet unanswerable—the relationship of this program with the International Cooperation Administration, the Institute of International Education, and Columbia University Teachers College's East Africa secondary school program, for example. A representative pointed out the particular qualifications of some small colleges for this kind of activity, and urged that they not be lost in the high-level shuffle. It seems probable that future Association for Higher Education meetings also will be concerned with the way this exciting enterprise develops.

The American as an overseas college student was considered by another group. There is growing sophistication about travel-study programs operated by American colleges and universities, and it shows in the kinds of problems raised in this meeting. There was consideration of the difficulties of the United States enclave in such cities as Paris and Munich versus the individual experience of the smaller provincial university; the problem of housing with other Americans versus living with local families; the problems of length of time abroad, nature of study program, and the overconcentration on Europe. Few easy answers were provided, but there was solid agreement on two matters:

that any travel-study program must have definite objectives and rigidly enforced standards, and that it must at the same time be constantly evaluated to permit change from year to year.

The assignment of the topic, "What faculty members can do on the issue of war and peace," would sound, under some circumstances, like a request for a high, warm gale. The response was of a quite different sort. The discussion benefited from the fact that it convened immediately after two striking speeches concerning the same terrain at a general session (by William Davidon and Saville Davis); it benefited also from the fact that its participants already had thought at length about these matters. The discussion centered around the development of an increasingly favorable climate for serious work on the problems of war and peace. There was detailed discussion of both teaching and research methods (for example, that the "game" method identified with the Rand Corporation could be profitably used to teach the realities of various national viewpoints). There was a sense of urgency about the need for systematic study and teaching, for reasons which are all too obvious. It was pointed out that many faculty members with special competencies may have to withdraw, in part, from tilling their own specialized gardens to contribute to a wider knowledge; it also was pointed out that there are vast areas of ignorance to be mapped and then attacked. The approach to all this was largely unsentimental, and entirely pragmatic. "The issue of war and peace" was discussed, in sum, as if it were an emerging discipline.

A Final Note

To a remarkable extent, a conference takes on a "shape." This was the year of the specific, the pragmatic for the Association for Higher Education. The theme that runs with astonishing constancy throughout the recorders' reports on discussion groups is a first demand for the clear definition of objectives and purposes. Since this was a meeting about goals, then, this was the first and most important one: Each educational enterprise should define what it is, and what it wants to do, in hard-edged terms. With its objectives established, it can proceed to attack its problems on many fronts; and, although it can never draw an accurate blueprint for the future, it can have standards against which its future activity can be judged. Such objectives are not pretty words for the opening pages of the college catalogue; they are tools. Without them, an institution can spin out its life improvising—and already there has been too much improvising, too much meeting of the moment for the moment, in American higher education.

With these tools in hand, the classic method by which academic man attacks his problems—gathering evidence, comparing it, and coming to rational conclusions and meaningful commitments—can go on. This businesslike tone was evident throughout the Sixteenth Annual Conference. If it proves to be infectious throughout American higher education in the Sixties, we all will be ahead for it.

External Testing Programs and the Schools

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THE USEFULNESS OF TESTS is patently dependent upon their selection by the local school in terms of clearly established needs and purposes. Tests are of value only as their results are used as one factor within the over-all process of evaluation. This process includes many appraisal techniques. Among these are observation of individual student behavior, anecdotal records, rating scales of pupil characteristics, sociometric devices, and individual interviews and conferences.

Extent of the programs. There are at present approximately twenty national programs. Six of these account for the greatest majority of students tested. The national programs vary from those purportedly designed to help students appraise their own abilities, interests, and educational strengths and weaknesses, to scholarship screening instruments and college entrance examinations.

The external programs involving the greatest number of students are in connection with college admissions and scholarships. Much of the duplication in testing is caused by the requirement of a particular test on the part of external agencies such as colleges, scholarship donors, or state agencies. These programs preclude the possibility that the schools can make a choice from among the competing programs. Because of the requirement of specific tests, it makes small difference whether a school prefers one program over another or even whether the testing is duplicative or redundant.

Since the value of giving any test is dependent upon the uses made of the results, how many tests are required to accomplish the same purposes? For example, one group of respondents to the school questionnaire reports using results of four major tests for the same purposes. The percentages reporting these duplicative uses are approximately the same. The uses made of results from four major external tests for the same purpose by sizeable numbers of the same schools raise serious questions. Does this overemphasis on tests mean that these schools are restricting the use of other evaluation procedures? Although the schools report little time given to interpretation of the results

of each test, is the total time given to interpretation excessive? Is time given to interpretation usurping the time of already overburdened counselors? Is the use of a multiplicity of tests to report pupil progress to parents responsible for the parents' apparent belief in the infallibility of tests? When these tests are used to identify areas for special emphasis, are they determining curriculum?

Programs of state-wide scope are now operating in forty-two states. These range from a single program in some states to as many as six in others. The purposes, plans, types of tests, and grades tested vary greatly. In many instances two or more programs are administered to the same people on the same grade level. Most of the respondents write that the results of this multiplicity of tests are used for identical purposes. If more than one of the tests is used by schools for the same purposes, as many respondents have indicated, *why is more than one test given to the same students?*

The following comments regarding reasons for participation in a multiplicity of tests are repeated many times in the course of the Joint Project: "There are reasons, pressures, and professional purposes that affect our decision to use these tests. The big reason is that we are expected to participate. Other schools do, so we must." "Public gullibility to testing as a panacea is increasing. The school is placed in a position of denying children if they do not participate in every testing program offered. Guidance counselors are becoming increasingly defensive." "The quality of education is currently measured, to large extent, upon the basis of student achievement on national and state testing programs. Therefore, our school must participate in these programs lest we be considered an inferior school."

The conduct of testing programs under Title V of the National Defense Education Act is spelled out in some detail. However, considerable discretion is left to the states in their individual plans. In each case the state department of education publishes a list of approved tests from which the local school district may make selections. Many of the states have stockpiled large quantities of tests in order to meet deadlines in expending available grants from the federal government. Because of these large amounts of unused tests in state "warehouses," many districts are now being pressured to take tests "off our hands" by state Title V consultants. This manifestly expands the practice of "tests for tests' sake" and compounds the problem of unplanned measurement.

Scholarships and the search for talent. The search for talent involves a wide variety of activities. The talents of the trained guidance counselor are recognized as vital to the education of all pupils. The Joint Project activities indicate that counselors are increasingly becoming centers for testing from the preplanning and administration to the interpretation of results. Certainly these tasks are defensible in the work of the counselor. However, if a proliferation of testing programs is to usurp his time, what of his most vital undertaking, the individual counseling of pupils?

In spite of the fact that scholarships contribute to the cause of education, the attendant competition has presented problems of grave concern to schools. In many sections of the country the quality of the schools is being judged on the basis of the number of scholarship winners—a ridiculous criterion for judging quality, to be sure—but the effects of this practice must be pointed up and serious questions raised. What are the effects of such practices on the measured

thoughtful planning of the curriculum? Is there a tendency for the tests to dictate the curriculum? Are the results to be used to evaluate teachers? Will these programs result in the establishment of production goals that a community may insist on reaching in its schools?

The largest scholarship program tested 550,221 pupils representing 14,549 secondary schools in 1960. From this large number only 1008 scholars were selected. The winners were selected on a state quota basis. Thirty-nine per cent of the respondents to a Joint Project questionnaire indicate that the relationship between the numbers tested and those selected negates the value of the program in terms of time and money involved.

This same scholarship program is offered as an instrument to aid in the guidance program. Yet, only twenty-two per cent indicate that the test serves, to any considerable degree, as an important part of the guidance program. Twelve per cent note that subject matter is being pushed down to earlier years in order to prepare for this program. Eight per cent of the respondents say that there is a tendency on the part of teachers to try to teach directly for this test. Sixteen per cent indicate that courses are being revised, in some way, to prepare for this test.

These data raise serious questions regarding the undue influence and value of this program. Sixty-eight per cent of the respondents say results of this test are used to determine how the achievement of local school groups compares with comparable groups in other schools. Certainly it is legitimate for an educator to want to view his school in relation to others. He also needs to relate his school to local needs. However, the question arises as to whether the trend here is toward standardization rather than toward meeting unique local needs.

College admissions. The multiplicity of external testing is enmeshed in the whole array of problems posed for students by college admissions. Data gathered in the Joint Testing Project indicates that the role of test scores is growing in importance as a controlling factor in admissions practices. The establishment of cutting scores to determine selection, the failure to use cumulative data about students which has been carefully developed throughout the previous twelve years of school, and the sparsity of measurement research, as it applies to admissions at the local level, all indicate the overemphasis on test scores. Approximately seventy per cent of the administrators, from all sections of the country, who responded to a questionnaire indicate an almost complete lack of information as to the real basis for admitting students to higher institutions.

The current status of external testing programs appears to have some relationship to prestige factors. Two cases will illustrate this relationship. One liberal arts college now requires candidates to write tests published by one of the major college admissions agencies. No student may be admitted to this institution without having taken and presented the appropriate test scores. The college shows no evidence of defensible planning for this program and has no local studies in progress regarding its usefulness. They readily admit that the prestige factor is a prime reason for requirement of the test. They mention the importance of being in the same league with those institutions commonly regarded as prestigious. The same condition was found in one university. Although the stated purposes of the two institutions cited here vary greatly,

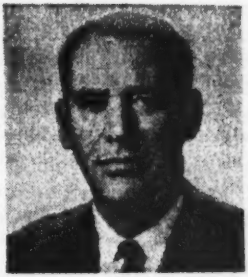
they have selected the same testing agencies for the same inadequate reasons. It may well be true that these two institutions are in a minority. However, until the use of tests in higher institutions is made clear, many of their test requirements will remain suspect.

Cost and time spent in external testing. External testing programs have added a new cost to public education. The costs of these programs are, in many instances, paid by the students. This is encouraged by many programs and publishers. The programs also often suggest a fee, in addition to the cost of the tests, for the payment of proctors, thus further increasing the cost to students. The Joint Study reveals considerable variation in the costs and time required for the external programs throughout the country. These two elements vary from none for the very small number of schools who do not participate in any of the programs to those where students spend up to twenty-three hours taking tests and twenty dollars on test fees. Added to the students' costs and time is the factor that some of the tests must be taken at locations as far as one hundred miles away.

External tests and the curriculum. The effects of external testing upon the curriculum is perhaps the most serious threat in the whole problem. Eighty per cent of the respondents to the school questionnaire view this as extremely grave.

Approximately thirteen per cent of schools sampled in the Joint Project report the changing of courses in one or more subject areas to earlier school years for the purpose of preparing students for certain external testing programs. Eight per cent of the schools report that teachers in those schools try to teach the test content. Many further report the development of syllabi for this purpose. Over seventy per cent of the schools express the feeling that the current most popular external tests aim at some concept of what test makers think should be taught. An average of nine per cent of the schools sampled report the establishment of special sections of certain courses to prepare students for a specific testing program. The greatest number reporting this do so in the interest of greater student success in gaining admission to colleges.

Most of the major testing agencies disclaim either the desire or the ability to influence curriculum. However, recently one of the most noted test makers and leaders in the field of measurement was quoted as saying, "Not only do these tests influence the curriculum, they should." This statement is not likely to be accepted by thoughtful educators who bear the responsibility for planning programs of education in a wide variety of settings.



JOHN C. PALMER

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THE GROWTH IN THE USE of standardized tests in American life is one of the phenomena of the twentieth century. A combination of the American passion for quantification and the successive pressures of wars, the Depression, exploding school and college populations, and rapid industrial specialization has brought testing in fifty years from a minor tool of psychological research and a primitive distinguisher of "feeble-minded" from "normal" children to a central role in the distribution of opportunity in an open-ended society.

While the expansion of standardized testing has been generalized to serve a very wide variety of purposes, in the last decade the most critical enlargement of psychometrics has been in support of the allocation of jobs, of scholarships, and of certain scarce educational opportunities. In education, this growth has been most notable in the external programs relating to college entrance and to the distribution of financial aid to college-bound students. The recent rapid growth in the membership of the College Entrance Examination Board and in the number of tests its technical affiliate, the Educational Testing Service, provides, the almost total acceptance of the National Merit Scholarship testing program into American high schools, and the spectacular launching of the American College Testing Program suggest the momentum now generated around the test makers.

As the surge toward testing has accelerated, social critics, thoughtful educators, and a few measurement psychologists have raised serious questions about the long-range and cumulative impact of these programs on the social climate and structure in America in general and on the high school in particular. They charge a variety of deleterious effects ranging from an unwarranted diversion of school time and school energies to a premature and irresponsible abdication of judgment to the impartial but insensitive justice of formulas and computers. Sorokin labels this the Age of Testocracy and laments that unrestrained power has gravitated to the Testocrats. At the end of the road looms Michael Young's sociological nightmare, the test-centered Meritocracy.

It is also recognized by most observers that the whole effort at psychological and educational measurement in this country is shot through with serious malpractice. Publishers' catalogues are filled with lists of tests which are invalid for their reputed purposes and whose reliability is dangerously low or improperly

assessed and reported. Normative statements only appropriate to group decisions are translated into individual predictions without the meagerest statistical treatment. Tests are used when other kinds of observations would be more valid and more appropriate.

More serious is the subversion of testing in the attempt to use test results in the evaluation of the comparative efficiency of either teachers or of school systems. It is clear that when the median reading achievement score of the number of National Merit semifinalists become widely publicized as criteria of goodness, the whole effort of the school will be narrowed to meet those goals. Thus begins the whole dreary procession of teaching for the test, of vocabulary drills, cram schools, and the like. I recall an applicant of last year who described his English program as very exciting. "This year," he said, "we are reading and discussing instead of studying word lists all the time." When an English course becomes exciting because reading is emphasized, we are clearly lost. One effect of the movement among certain Eastern colleges to use junior year tests results and to complete the assessment process by December of the senior year is to leave the bulk of grade twelve for education, rather than for "preparation." It is tragic that so many secondary schools in the East oppose this arrogant and arbitrary manipulation of their schedule of teaching only because they fear that once the cudgel of examination is removed, high school seniors will retreat into unmanageable apathy or frolic.

For those of us who have spent our careers in psychological services, the most disturbing outcome of the increasing tendency to use testing and test results as extrinsic goads and rewards is the negative and unproductive view of the assessment process that is developing in the attitudes of teachers, parents, and, most critically, in boys and girls. Too many young people are being taught to view tests not as opportunities for personal exploration and self-discovery, not as derived personal statements on which decisions may be built, but as obstacles to be surmounted and forgotten. Perhaps most alarming of all is the mounting evidence from the work of Getzels and others that in focusing on those qualities which are accessible to measurement and which relate to subsequent academic success, we are rewarding a joyless docility to adult demands and denying creativity.

In view of this pattern of malpractice surrounding the use of tests in education, many in measurement and in guidance feel that schools should resist the trend toward wider and wider application of tests and should declare a moratorium on test construction and test use until these difficulties can be resolved. Disturbed as I am by such a dismal recital, my personal strategy involves an unhesitating acceptance of testing in a central role, a substantial increase in the amount of testing throughout all levels, and a direct assault on the deficiencies and distortions that impair the use of tests.

Any other position strikes me as hopelessly quixotic, unscientific, and uneconomic. The forces that have impelled the recent growth of testing promise to swell in the next decade. As long as the nation has a shortage of desired opportunities in higher education and a widely differentiated pattern of colleges and universities, a prediction process with nationally standardized tests at its core will be operative. At this moment I pass the question of whether this shortage of wanted places in certain colleges is a wise and necessary outcome of

national purpose in higher education. Whatever the solution to needed expansion of higher education, the perceived differences between colleges in America will continue to be so great that the number of colleges using selective admissions is likely to increase substantially.

It seems to me that the multifactor prediction of academic success is on a sufficiently secure statistical and operational foundation and is widely enough employed to need no justification. The increased professionalization of the administration of college admissions and in-service training efforts like the "prediction seminars" sponsored by the College Board have provided the institutional framework for the improved use of test data in college admissions. Current explorations into the possibilities of central prediction through the pooling of data from similar colleges promise substantial strengthening of present prediction indices. In immediate prospect, the high-speed computer will permit a very great increase in the number of variables that can be brought under simultaneous statistical inspection and, perhaps, the long-sought differential prediction among college programs.

As I have viewed the climate around selective admissions from the two perspectives of the high school and the college, I am convinced that, in spite of the grumbling and tension about external college admission testing, candidates, parents, school counselors, and, I suspect, alumni, taxpayers, and donors, all feel that "the tests" introduce a certain crude equity into an all too arbitrary and discriminatory process. Testing of this kind seems to be compatible with the American folklore about economic and social mobility in a free society. As a corollary, "talent searching" among the culturally and economically deprived on a national scale depends on a multilevel assessment process in which tests serve both an original identifying and a final predictive function.

With the rapid growth of honors programs in high school, the expansion of junior and community colleges, early admission and advanced placement, it is patent that the lines between secondary school and college are becoming blurred. In a few years, it may be characteristic for the adolescent of fifteen to nineteen to have a wide range of experiences, some of which would be labeled collegiate and some secondary, available to him in a variety of settings—high school, junior college, and senior college. As the migration across these blurred boundaries steadily swells, the paper placement in college of students entering at a series of ages from a variety of experience will be rendered manageable and meaningful by an elaborate use of tests of which the Advance Placement series are prototypes.

With such indications of further growth in the psychometric interchange around college admissions, I judge that the situation demands a major effort, immediately, to correct abuses, readjust attitudes, to upgrade technical competence, and to improve practice in the use of tests. It has been my tenaciously held view, even through a long romance with client-centered counseling, that the most dangerous misuse of standardized tests has its roots in overdependence on a single isolated measure, overinterpreted to an apparent significance well beyond its statistical power to reach. The myth of the invariant IQ score is derived from the false economy of trying to extract more meaning from a single score than it can legitimately contribute. The cure is not in a planned reduction in the total volume of testing but rather in what elsewhere I have labeled

"saturation testing." By this I mean a sequential administration each year of all the standardized tests that may add a significant new dimension to the unfolding of the child. With such a longitudinal series of reference points set in a developmental history of physical growth, anecdotal observations, and a variety of self-report documents, no one test score is likely to suffer the typical distortion from overextension. By articulating all measures including the final college entrance series into a developmental sequence, so recognized by admissions officers, school counselors, and boys and girls, a major step would be made toward ending the defeating distinction between "entrance" tests or "scholarship" tests and "guidance" tests. Such an "ideographic" approach recaptures for testing its proper relationship to a continuous process of self-discovery.

Recent developments in College Board policies and purposes give some basis for optimism. Within the past two years, the board has removed the secrecy from all examination scores, has created the Preliminary Scholastic Aptitude Test and given it to the secondary schools as a school administered guidance test, has established a standing Committee on Guidance, and is about to publish a *Handbook of College Characteristics,* which will reveal, among other data, the composition of entering classes in terms of distribution of test scores. These series of policy decisions are supportive of the creation of a continuous guidance process, employing testing as a part of the elaboration of self-knowledge. In prospect is a return to the time when, in the last years of secondary school, boys and girls will match themselves realistically against the various collegiate challenges and climates and will have chosen a college in substantial knowledge of the alternatives and consequences and with every reasonable expectation of admission.

While in these ways the College Board is freely returning the initiative to the schools and to applicants and undergirding a school-centered guidance process, in curriculum development the tendency of the last few years seems quite clearly a reassertion of controls and influences largely abandoned following World War II. Historically, the Eastern colleges loosened their grip on the secondary school curriculum at the beginning of the Depression and lost it almost entirely during the Forties. In the East I recognize a massive, if only partially conscious and organized, effort to detach the college preparatory curriculum, teacher, and pupil from the comprehensive high school and to build special lines of communication and allegiance to the colleges. In this effort, the College Board is a convenient, if only partly cooperative, agency. The introduction of the highly controversial Writing Sample is a case in point. In spite of the opposition of the professional staff and the special committees that had studied the problem of measuring mastery of English prose, a majority of the member colleges approved the Writing Sample, in large part, as a stimulus to more and better instruction in writing in high school. This is a dangerous precedent in curriculum manipulation and should be carefully examined.

However, the threat of the external agencies to the independence of the high school should not be exaggerated. In this period of reaction their existence may forestall rigidly prescribed course sequences for college entrance. Bad as cram schools and the futile and deadly vocabulary building classes are now, college-prepared syllabic and reading lists are infinitely worse. In turn, the American Council on Education Psychological Examination and the Scholastic

Aptitude Test have been bulwarks of freedom to experiment in secondary education.

As the number of external agencies has multiplied, their intrusions on school time have exceeded mere nuisance. This has provoked some observers to press for a reduction in the number of agencies through merger, centralization, or incorporation as a government activity. While it seems wasteful to have similar colleges and similar scholarship programs using entirely different test series, pluralism is one of the American defenses of freedom. In this instance, the history of the New York Regents Examinations suggests that curricular freedom is worth the nuisance of multiple testing.

As a final observation, I submit that one of the sources of difficulty with external testing programs and the impact on schools is their exclusive focus on certain intellectual skills. For their utility in the improved prediction of collegiate performance and improved guidance, and to loosen the school's and the public's preoccupation with a rather constricted body of intellectual tasks, it seems to me time to pool the resources of education, government, and behavioral science into a major effort to bring such factors as "motivation" and "creativity" under actuarial control.

NOTE: Chairman of this group was GEORGE B. SMITH, Dean of the University, University of Kansas; the recorder was C. W. BROWN, Dean of Students, Illinois Institute of Technology; the resource persons were KENNTH W. LUND, Superintendent, Oak Park and River Forest High School, Illinois; and JOHN D. MEES, Principal, University School, Southern Illinois University.

Development of Admission Criteria for Colleges and Universities That Will Not Eliminate Such Applicants as the Bright Nonconformist, the Underchallenged, and the Individual with Highly Specialized Ability

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INSPECTION OF CURRENT RESEARCH REPORTS on the selection of college students discloses that we are approaching the selection goal we set for ourselves some years ago. For example, B. S. Bloom and P. R. Peters report that by devising a special method of scaling high schools they have found intercorrelations as high as .85 between high school and college grades. Considering the reliability of college and high school grading it seems clear that this relationship has gotten about as high as it can get. In fact, it seems that with just a little more methodological care devoted to our examination and grading decisions in high school and college we may soon hope to admit to college only a relatively pure strain of "grade getters."

Assuming that grade getting is not, in and of itself, an esteemed value, our satisfaction with this state of affairs will depend in part on who it is that is judged "unfit" in the struggle for survival in the office of admissions. For if by evolving a race of grade getters we have bred some extremely desirable characteristics *out* of our college population, we should at least be as much aware of what we have lost as we are of what we have gained. Thus, inasmuch as this paper is mainly concerned with the "unfit" or nonconformist, I shall next consider the characteristics of those who do not "get grades." This is a group that is more and more being barred from college by the increasing admissions pressure and our improved selection devices. Clearly a large number of these are students of inadequate ability. Everyone's interests are best served by directing these students to other fields of endeavor. However, what of the high ability student who has earned poor grades? What is he like?

Two years ago while spending a year at the Institute of Personality Assessment and Research at Berkeley I had the privilege of interviewing a group of

highly creative architects and examining the interviews of other highly creative individuals who had been studied at the Institute. Some of the most creative and productive architects, scientists, and mathematicians in our society report that they were mediocre or poor grade getters. Many of these might now be classified as "unfit" by an admissions officer. Offhand, I don't recall a valedictorian in the lot. Perusal of accounts of the lives of manifestly creative and productive men reveals that if selection techniques had reached our current state of technology at the time they applied for admission, a good number of these men would have been denied a college education. In research in our laboratory at Michigan, we have observed that individuals who are classified as creative on the Remote Associates Test tend to have a relatively low gradepoint average in their first two years of college ($r=.27$). In fact, a few of the highest scorers on the test were in danger of being dropped from the technological institute at which the study was conducted. One of these men told me that he couldn't bring himself to memorize formulas which were readily available in standard texts and which "the professors themselves hadn't memorized." More information concerning the characteristics of the high ability, low grade-getting youth is described in a summary of unpublished studies by Jonietz, Carlson, and Iscoe. Entitled "The Superior Failure," the article suggests that these individuals simply do not share some of the values relevant to grade getting. Research by J. W. Getzels and P. W. Jackson reveals that many highly creative individuals who do relatively poorly on traditional measures of intellectual ability will at least equal the learning achievement of individuals with considerably higher IQ's. In addition, their performance on tasks requiring original and imaginative thinking is considerably superior to their fellow students with higher IQ's. We should, however, also note that the creative students are considerably more difficult to deal with in a classroom setting. Teachers tend to dislike these students.

I am suggesting that current admission practices may be gaining in efficiency and, as a result, certain kinds of high ability students will be increasingly denied admission to college. Further, I am suggesting that among these high ability students there will be individuals who may have the potential for having original and useful ideas. However, it should be pointed out that these individuals do not seem to be distinguished by a scrupulously careful regard for the values and expectancies that prevail in many of our campus societies. On the other hand, Heist and Webster have made it clear that disregard for traditional values has in turn become the prevailing norm on some college campuses. We are now in a position to ask a new question. Assuming we wish to see the "nonconformist" receive college training, which colleges should admit him? Should we make an effort to see that he gains admittance to the conservative college in order to widen the experiences of the entire student body, not to mention the faculty? If we answer this question affirmatively, we must be prepared to broaden the limits of our definition of acceptable behavior for our college students.

An alternative is for colleges to select by values; within defined limits students would not be admitted to colleges in whose environs they would be misfits. Some examples of values and life orientations which have been shown by Heist and Webster to differentiate colleges and student groups are Authori-

tarianism, Impulse Expression, Esthetic Orientation, Originality, Complexity of Outlook, Religious Attitudes, and Economic Values. While some of the implications of this aspect of selection are quite distasteful to me, it should be pointed out that self-selection of students along these lines is already taking place. In cases where the student's perception of the colleges' "image" is inaccurate, an inappropriate matching of interests seems inevitable.

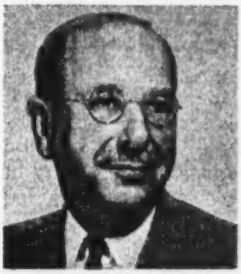
In summary, I believe we are well advised to take steps to admit the promising nonconformist. However, I am not suggesting that any colleges undertake to do so before a careful consideration of the match they are making and the possible consequences they and their students may be made to endure.

Throughout this paper I have been making undiscriminating reference to the "nonconformist." Many readers have doubtless begun to envision their campuses as becoming outposts of the North Beach and the Village, with black-stockinged, juvenile werewolves disdainfully smiling marijuana-warmed smiles at the ignored history professor. This emphasis on and glorification of originality in behavior and thought has somewhere along the line missed an essential point. Originality or nonconformity are probability statements. We say something is original or nonconforming if it rarely occurs. In this sense, simple originality is the cheapest and easiest response that an organism can make. "Three plus three is 6,363,742." "The first president of the United States was Roy Rogers." "An effective vaccine against polio could be developed from a mixture of Eau de Cologne and mint juleps." These are all quite original statements. Originality and nonconformity characterize much of the behavior of most nonconformists. It is the rare beatnik who also creates useful or artistic products. It is cheap to be a nonconformist and emit unusual behavior or thought; when original behavior or thought meets criteria, is useful, or satisfies some need (very broadly defined), then we may refer to it as creative. It is the creative nonconformist that we must somehow accommodate in our colleges.

How do we recognize him? For obvious reasons we do not recognize him through the use of tests simply scored for originality of response. Often on tests like these, a man listing his relatives' names could achieve a high score. Instead we must look to those tests which have been constructed so as to require the student to make original responses in ways which meet well-defined requirements. In this way we can hope to select not merely the nonconformist, but the nonconformist who can bend his originality to artistic or scientific tasks.

NOTE: Chairman of section 1 of this group was WILLIAM A. HUNT, Chairman, Department of Psychology, Northwestern University; the recorder of section 1 was JOHN HICKS, Executive Secretary, The College English Association, Inc., University of South Florida; the resource persons for section 1 were ROBERT L. EBEL, Vice President for General Programs, Educational Testing Service; and JOHN L. HOLLAND, Director of Research, National Merit Scholarship Corporation. Chairman of section 2 of this group was C. E. HARRELL, Registrar, Indiana University; the recorder of section 2 was RICHARD WALK, Associate Professor of Psychology, George Washington University; the resource person for section 2 was ROBERT E. IFFERT, Chief, Faculty & Student Services Section, College and University Branch, Office of Education, U. S. Department of Health, Education, and Welfare.

Characteristics of the Creative Person: Implications for the Teaching-Learning Process



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DIFFICULT AS THE TASK MAY BE, it is far easier to describe the characteristics of the creative person than to indicate with any degree of certainty their implications for the processes of teaching and learning in higher education.

The difficulties are several. It is one thing to discover, as we have, the distinguishing characteristics of mature, creative, productive persons. It is quite another matter to conclude that the traits of creative persons observed several years after college characterized these same individuals when they were students. Our problem is further complicated by the fact, that though our creative subjects have told us about their experiences in school and college and the forces and persons and situations which as they see it nurtured their creativity, these are, after all, self-reports subject to misperceptions and self-deceptions. Even if we were to assume that their reports are essentially accurate we would still have no assurance that the conditions in society and in college, the qualities of interpersonal relations between instructor and student, and the aspects of the teaching-learning process which would appear to have contributed to creative development a generation ago would facilitate rather than inhibit creativity if these same factors were created in today's quite different world.

Creative persons are intelligent. But this is not the most important thing to say about them. There is no one-to-one relation between creativity and intelligence. The feeble-minded are not creative. Yet it is also true that the most intelligent persons are not always the most creative. In the various groups we have studied, intelligence, as measured by the Terman *Concept Mastery Test*, is not correlated with creativity. Among creative architects the correlation of the two variables is –.08; in a group of research scientists, –.07. Obviously this does not mean that over the whole range of creative endeavor there is no correlation between intelligence and creativity. It indicates rather that a certain amount of intelligence is required for creativity, but beyond that point being more or less intelligent does not crucially determine the level of a person's

creativeness; and the level of intelligence required for creativity is sometimes surprisingly low. If we are to nurture creativity we shall have to disabuse ourselves of the idea that only the most intellectually gifted are creative.

Creative persons are original. This statement will strike you as a tautology, if, like many, you conceive creativity to be essentially novelty or originality of response. With such a notion I would strongly disagree. As I see it, creativity has at least three phases or aspects. It involves a response that is novel or at least statistically infrequent; but that is not sufficient. It must be adaptive to reality; it must serve to solve a problem or fit the requirements of a reality situation. And, finally, there must be an evaluation of the original insight, together with a sustaining and developing of it to the full.

In general, those who are most fluent in suggesting new solutions tend also to come up with the better, more adaptive ones. The quantity and quality of original responses correlate +.53 in one test of creativity (Consequences) and +.78 in another (Unusual Uses). These correlations suggest that some persons tend to make many original responses which are not very good, while others make fewer but generally better or more fitting ones; and this is our finding.

To nurture the fullest creativity, emphasis must be placed upon seeking the implications and deeper meanings and possibilities inherent in every idea. This involves pursuing ideas in depth and in scope. However fresh and clever they may be, insights do not enter the stream of creative solutions to urgent problems unless their consequences are tested in application and revised and extended to meet the requirements of the situation for which they were first devised.

Creative persons are independent in judgment and in thought and action, relatively free from the more conventional restraints and inhibitions, not preoccupied with the impression which they make on others and thus perhaps capable of greater independence and autonomy, inclined to recognize and admit self-views which are unusual and unconventional, and strongly motivated to achieve in situations which call for independence. Perhaps not unrelated to these dispositions is the fact that creative persons often report having been less than happy and satisfied at home, in school, and in college. Such is the testimony of a group of research scientists, many of whom were honor students in high school whose academic performance, however, later worsened, most of them earning no better than a C plus or B minus average in college, in part due to their inclination to follow their own interests and to explore independently problems of their own setting. Creative architects whom we have studied performed somewhat better in college, averaging about a B. But in their college work they were no less independent than the research scientists. In work and courses which caught their interest they could turn in an A performance, but in courses that failed to strike their imagination, they were quite willing to do no work at all. In general, their attitude in college appears to have been one of profound skepticism. They were unwilling to accept anything on the mere say-so of their instructors. Nothing was to be accepted on faith or because it had behind it the voice of authority. Such matters might be accepted, but only after the student on his own had demonstrated to himself their validity. In a sense, they were rebellious, but they did not run counter to the standards out of sheer rebelliousness. Rather, they were spirited in their disagreement and one gets

the impression that they learned most from those instructors who were not easy with them.

Creative students often chafe and rebel, not because they are lazy, or because their level of aspiration is low, or because they are "rebels without a cause." The problem, if we permit it to become one, derives from their high level of energy channeled toward activities and goals which they set for themselves and which may well conflict with those we hold for them. How we respond to the creative student's need for independence, to what degree and under what conditions we grant this autonomy and even reward him for behaviors not entirely to our own liking, de-emphasizing group participation with its demands for conformity and providing him opportunity to work out his own interests are, I am sure, crucially determinative of the level of creative accomplishment which he will ultimately achieve.

Creative persons are perceptive, open to experience both of the inner self and of the outer world. The perceptive attitude expresses itself in interest and in curiosity. It is the hallmark of the inquiring mind and of the creative person. The open mind can, of course, become cluttered and may, until it orders the multiplicity of experiences which it admits, reveal a great deal of disorder. And such disorder can cause anxiety. Instead of seeking a rigid control of experience, repressing impulse and imagery, blinding oneself to great areas of experience, and never coming to know oneself, creative persons are able to recognize and give expression to varied aspects of inner experience and character, including the feminine in the case of the male and the masculine in the case of the female, admitting into consciousness and behavior much that others would deny, integrating reason and passion, and reconciling the rational and irrational.

Such richness of experience is not always easily or safely encompassed, and for that reason creative persons often show more than an average amount of tension and turmoil. But if creatives often reveal some measure of psychopathology, they also give evidence of ego strength and adequate mechanisms of control as the success with which they live their productive lives testifies.

Creative persons are intuitive, both in their perceptions and in their thought processes. In perceiving, one can focus upon what is yielded by the senses, emphasizing sense perception of things and facts; and in the extreme case one can remain stuck there, bound to the stimulus, the presented material, the situation; or one may, in his perceptions, be more sensitive and responsive to the deeper meanings, the implications, and the possibilities for use or action of that which is experienced by way of the senses. The immediate apprehending of the real, as well as the symbolic bridges between what is and what can be, is intuitive perception, and it is the creative person's preferred mode of perceiving.

Similarly, in thinking, one can proceed slowly, cautiously, inductively, in step-wise fashion, reasoning analytically and logically, and sticking to formal methods of deduction and proof, or one can by making bold leaps in imagination and thought arrive at apprehensions of larger wholes and solutions of problems with little awareness, if any, of the process or of the steps by which the new insights are gained. Such immediate apprehension or cognition, which is characteristic of the creative person, may be called intuitive thinking. It

stands in the same relation to logical and formal mediated thinking as intuitive perception does to sense perception.

We do not know the extent to which intuitive perception and intuitive thinking can be nurtured by appropriate educational methods. But I would venture to guess that rote learning, learning of facts for their own sake, repeated drill of material, too much emphasis upon facts unrelated to other facts, and excessive concern with memorizing can all strengthen and reinforce sense perception. On the other hand, emphasis upon the transfer of training from one subject to another, the searching for common principles in terms of which facts from quite different domains of knowledge can be related, the stressing of analogies and similes, and metaphors, a seeking for symbolic equivalents of experience in the widest possible number of sensory, imaginal, and ideational modalities, exercises in imaginative play, training in retreating from the facts in order to see them in better perspective and in relation to more aspects of the larger context thus achieved; these and still other emphases in teaching and learning would, I believe, strengthen the disposition to perceive and to think intuitively.

If the widest possible set of relationships is to be established among facts, if the structure of knowledge is to be grasped, it is necessary that the student have a large body of facts which he has learned, as well as a large array of reasoning skills which he has mastered. I am not proposing any slighting of keen and accurate sense perception, but rather that we use it as something to build upon, leading the student whenever possible to an intuitive understanding of his experiences.

The creative person has strong theoretical and aesthetic interests. A prizing of theoretical values is congruent with a preference for intuitive perception and thought, for both orient the person to seek a deeper and more meaningful reality beneath or beyond that which is present to his senses. Both set one to seek truth, which resides not so much in things in themselves as in the relating of them one to another in terms of identities and differences and unifying principles of structure and function. Theoretical interests and values are carried largely in abstract and symbolic terms. In science, for example, they change the world of phenomenal appearances into a world of scientific constructs.

Although for some there may be a conflict between the theoretical value with its cognitive and rational concern for truth and the aesthetic value with its concern with form and beauty, these two values are the strongest values of creative persons. That they are both emphasized and reconciled suggests that for the truly creative person the solution of a problem is not sufficient; there is the further demand that it be elegant. The aesthetic viewpoint permeates all of the work of a creative person. I would call your attention to one more characteristic of creative persons—their preference for the unfinished, the disordered, the complex, the rich, which invokes in them an urge to discover unifying principles which order multiplicity and to carry to harmonious conclusion that which is unbalanced and incomplete.

NOTE: Chairman of this group was D. ALEXANDER SEVERINO, Associate Dean and Professor of the Fine and Applied Arts, Ohio State University; the recorder was LAWRENCE L. BETHEL, President, Fashion Institute of Technology.

Institutional Policy in Relation to Student Rights in Controversial Situations

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THIS TOPIC IS, for me, a special case of a broader concept: the nature of the relationship between a college or a university and its enrolled students. This relationship is best characterized by two terms: *fiduciary*, or the obligation of a trustee for the welfare of another person, usually a minor; and the familiar descriptive phrase, *in loco parentis*, which has, for centuries, defined the loving care of a foster mother for her foster children. Students' rights are defined, currently, in part (usually in unwritten form) by these two traditional types of relationships.

Unlike the German tradition of students' academic freedom, in the American college we have no parallel tradition of students' rights. Rather, with some exceptions, our American traditional relationship with students has been one of enforcing restrictions and restraints on behavior. To be sure, some agencies—especially the American Civil Liberties Union and the National Student Association—have been energetically engaged in defining rights and privileges, in part to ease and modify these restraints and restrictions. The history of the struggle for freedom of behavior does no credit to the sense of fiduciary responsibility or foster motherhood of some educational leaders. For instance, it is disturbing that Robert M. MacIver (in his *Academic Freedom in Our Time*) cites few instances of liberating acts by college administrators. An organized revolt against oppression by a dean of students or a president makes better copy in all media of communication, it seems.

Institutional policy in relation to student rights in controversial situations can be examined, I think, through seeking the answers to these questions: 1) Do students enjoy or possess rights within the college that differ from their rights in the community? 2) How are students' rights established? By what agency or jurisdiction? 3) Are students' rights different concerning controversial situations as contrasted with noncontroversial situations or issues? 4) What agency classifies a situation as controversial? What characterizes a situation

as controversial? 5) What are some possible consequences if the educational enterprise is limited to questions, issues, and content classified as noncontroversial? 6) What, if any, role should students play in formulating and adapting statements of their rights concerning controversial issues or questions?

I have insufficient space to examine each of these six basic questions but I will state my own dogma. In the first place, I assert that the institution has both a proper legal and a proper traditional concern for the form and manner in which students, as students, exercise their rights. Although this is a controversial point in both historical and current times, I believe that in education we are in the business of forming character, of a peculiar sort. Even though we do not fully agree as to objectives, we do have agreement on some aspects of the American character. Among other virtues, we expect our students to be fair-minded, to experience a concern for the welfare of others, to be honest, and, most importantly and relevantly, to use intellectual methods in seeking to understand their world and their relationship with it.

In seeking to cultivate these virtues in students, we do not assign to them the role of a passive recipient of a molding process. Increasingly, experience indicates that students learn most when they participate most actively in an educational partnership. I would apply this same educational methodology to the written formulation of students' rights. Why should they not participate actively in policy making of rights, even though legal power to make regulations and to define rights resides corporately in trustees? Indeed, the long-established tradition of delegating powers to the faculty concerning academic matters should be and is being currently paralleled by a similar delegation to students through participation in defining rights as well as restrictions.

As to the right to examine or advocate a controversial topic, we sometimes forget that every topic discussed in a college has its controversial aspects. Indeed, it is by means of conflict of ideas that we test their validity. Without controversy, education could be Pavlovian indoctrination. But there are degrees and kinds of controversy and our topic concerns the underlying query: What kinds of controversial questions are appropriate for what manner of examination in a college? My point, therefore, concerns the process followed in identifying the degree or point at which a discussion becomes too controversial for discussion within the institution.

Two criteria appear to dominate categorization of certain issues as controversial. The first is the political or other sensitivity of an institution's leaders to a source of power external to the college. Such sensitivity may arise from a trustee or political leader who desires that a particular topic not be discussed or a point of view not be espoused. Or the source may be a president who desires to avoid controversy of any kind. In such instances, patient insistence by students and faculty for discussion may, in time, desensitize the source of opposition to open discussion of many other topics. A second criterion, however, seems to me to be more fruitful in the establishment of an open campus. It is the relevancy or appropriateness to the educational enterprise of the manner or method of discussing issues—especially controversial issues. From among the many attempts to define some aspects of this criterion of relevancy, I point to two especially. In 1936 President L. D. Coffman of my own institu-

tion formulated a policy of relevancy by defining the proper manner of examining a controversial issue as different in an educational institution from the community-wide espousing of a cause or the seeking of converts to a point of view. Recently, President David O. Henry has also referred to a criterion of relevancy to the education enterprise. Both leaders were contrasting methods of discussing and examining issues in political jurisdictions and in educational institutions. It is contended that some methods are not appropriate in an institution dedicated to critical search for truth, as opposed to the enlisting of advocates of a particular formulation of truth. That is, discussions taking place in the market place may differ in objective and in methods from those employed in a seminar or classroom.

This issue is, of course, itself a highly controversial issue as to who will determine the appropriateness of methods and content of inquiry. I suggest that the "best" answer is to be found in the very act of examining the appropriateness of discussing whether a particular topic or issue should be discussed on the campus!

A third point suggests itself as worthy of examination and it has to do with my first question: Do students have rights? Dean V. C. Gildersleeve has replied to this question in the negative, asserting that, to be sure, students retain their political rights within a political jurisdiction. She contends that the only right they possess within an educational institution is *the right to the best education the faculty can provide.* I subscribe to this point of view, and I believe a great deal of confusion arises from our failure to distinguish between two sets of rights, one granted by the college in its fiduciary relationship with students and those political rights possessed by all citizens, including students. The confusion has, in part, arisen from the attempt to exercise political rights within the campus.

Let me turn now to an analysis of the concept of controversial issues. I believe this to be the core of the issue of students' academic freedom. One basic weakness in the defense of restriction of discussion lies in the transitory character of the classification process itself. That is, from one decade to another the interaction of society and the college changes. An issue is viewed differently after controversial community discussion *because* of that widespread examination of the nature, content, and significance of the issue itself. One has only to remember that in my own state university, three and a half decades ago, the teaching of evolution to students was a politically sensitive, controversial issue which required the highest act of leadership of the faculty and the administration, together with the forces of the community, to turn back an attempt to prohibit the teaching of this controversial issue. Today there is no discussion whatsoever of such a prohibition. The theory of evolution has not been changed, but certainly our perspective of it as a controversial issue has changed.

Two ancient illustrations of the weakness of the concept of controversial issues are quoted by Ernest Earnest in his *Academic Procession.* In 1832, the Jefferson Society of the University of Virginia sponsored a student oration on Jefferson's birthday concerning the abolition of slavery. The faculty was disturbed and resolved that "because the University was supported by all parties, it was unwise to bring up such a controversial topic. Hereafter," they ruled,

"there should be no oration on any distracting question of state or national policy nor on any point of theological dispute." The next year (1833) in Lane Theological Seminary, Cincinnati, following the organization of an antislavery society, the trustees this time ruled that "education must be completed before the young are fitted to engage in the collisions of active life." I use these two illustrations to indicate that the category, "controversial," as applied to discussable issues, either within or outside the curriculum, is arbitrary and results from either fear of some force in the community which will disrupt education or is defensive of some biased point of view. On both counts I suggest that we accomplish little in formulating students' right to discuss controversial issues, unless we acknowledge the inadequacy of such a loose category.

(I have no space to discuss in this paper three advocated institutional policies and practices; a) complete denial by the college of the right *or* privilege of discussing or demonstrating concerning controversial issues; b) complete laissez-faire policy of no control or supervision by the college; c) use by students of forms of violent and emotionalized demonstrations in support of a cause against the administration. I do not subscribe to all of them.)

I suggest that we face squarely the imperative necessity of carefully formulated and formally adopted codes of academic freedom for students, both within and outside the classroom. Such a right to be informed through listening, reading, and discussing is the very heart of the educational enterprise. This is what education is about. It is a critical examining of evidence in support of someone's interpretation of a situation, condition, or experience. We should help students to formulate rights and privileges of free and open educative discussion on all issues that interest them. Moreover, the faculty and personnel workers should aid students to perfect effective educative ways of examining controversial issues. Such a search for ways of exercising academic rights should be more productive of the firm establishment of these rights than is the issue whether students do, in fact, possess such rights.

NOTE: Panelists for this group were CARL M. GRIP, JR., Dean of Men, Temple University; TIMOTHY JENKINS, National Affairs Vice President, U.S. National Student Association; and RUTH O. MCCARN, Assistant Dean of Students, and Director, Vocational Guidance and Placement, The University of Chicago. The moderator was ROYCE S. PITKIN, President, Goddard College; the recorder was LESLIE A. HOLMES, President, Northern Illinois University.

Opportunity Must Follow Encouragement

REXFORD G. MOON, JR.

Director
College Scholarship Service

A GREAT DEAL HAS BEEN WRITTEN, even more has been said and, believe it or not, a lot is being done to provide higher educational encouragement and opportunity to disadvantaged groups. The problem has its origin in conditions of poverty, segregation, poor schooling, decadent housing, to mention only a few. *These are the issues of the times.* The intensity of the search for educational counterirritants to these conditions, in the cause of equal educational opportunity, is without precedent.

Throughout our nation many special programs have developed which are easing the situation. There have been more unheralded than heralded efforts. The varying approaches to the problem of lost talent, which these programs have taken, prove that the problem is complicated and that there is no widely accepted or simple way of attacking it.

I have drawn certain general conclusions which may serve to guide us to a course of action for the future.

1. Our secondary schools must once again provide an atmosphere which encourages college going.

2. Education, at all levels, must be provided in an atmosphere that emphasizes the worth of the individual, no matter how small it may seem to be at any one point in time.

3. The methods by which intellectual potential of young people is now evaluated may be open to some question and should be intensively studied.

4. Until the noneducational units of our culture attempt to attack the problems of educational opportunity for our young people, and have a better acceptance of what constitutes educational freedom, we may expect to make only limited progress.

5. We should realize that progress toward developing better incentives for higher education will be slow from now on, because, in recent years, the hunting has been heavy in the most productive areas.

6. The success of efforts to increase personal incentive for education should

not be judged solely by quantitative changes in college-going but also by qualitative ones.

7. No single post high school educational system will assure the maximum utilization of our talented youth. A system of all private institutions would not be any better than a system of all, or predominantly, public institutions.

8. Steps to be urged or undertaken by higher education to assure the full development of personal incentive for higher education should be formulated to reflect this problem as one of broad national responsibility for its cause and solution. Education alone has not caused this problem; education alone cannot solve it.

9. Higher education cannot and should not remain as an interested bystander to this struggle. Its policies of recruitment, admissions, financial aid, advancement, guidance, and teaching must recognize the encouragement of deprived youth as both a challenge and a responsibility of the college.

10. Efforts directed at solving this problem must include a provision for greatly increased resources to assist individuals with the financing of an education.

Money, or the lack of it, is a major problem; in many instances its actual or apparent shortage does prevent college attendance; in other instances it affects college choice. It can and does have a negative effect on school and college performance. If nothing else, the lack of money may serve as a socially acceptable excuse for not attending college. In addition to the effect which a lack of money has on people's attitudes and responses toward education and, for that matter, toward other things in life, a lack of it in a community can affect the kinds of preparatory education offered and the surroundings in which it is provided.

Talent loss is an evil; an evil which money is the root of. For some people there is not enough money to provide more than minimum subsistence; for others there is not enough to provide adequate schooling; for still others there are too many immediate money rewards to consider a sizeable expenditure on education, in order to gain at best a slight increase in such rewards or even a potential decrease in them. And for some there can be so much money that there is no incentive.

The results of Elmo Roper's study for the Ford Foundation nicely illustrate the effect which the presence or absence of money has on family attitudes toward the financing of a higher education for their children. Drawing from a cross section of American families with children still some years away from college, the study showed among other things: 1) that financial reasons are given as the most likely major deterrent to college attendance by those of low economic status, but they are not even mentioned as a possible deterrent by those of high status; 2) that the interest in state-supported institutions for those of high and low economic status is equal, but there is a marked disparity in the aspirations toward attendance at private institutions; 3) that attending college away from home is a probability for those of high economic status, but only a slim possibility for those of low status; 4) that families generally underestimate the current cost of attending college and do not anticipate probable future increases in such costs; 5) that high status families expect to pay more for, and a greater share of, college expenses than low status families, though the

latter group still expects to contribute seventy per cent of costs; 6) that families of high economic status expect significantly more scholarship aid than families of low status; 7) that the willingness to borrow may be assumed to be equal for families at all income levels; 8) that the willingness for children to work is lowest in the high status group, highest in the low status group; 9) that saving for education is practiced by a small majority of those of high status but by only a small minority of those of low status, but in neither group is the average amount of savings substantial; 10) that the greatest certainty about all aspects of the educational future of their children is expressed by high status families, the greatest uncertainty by families of low status.

With our concerns about those who don't now go to college at an all-time high, and our knowledge about those who do go to college as complete as it may ever be, we will probably never again find a more advantageous time to revamp our financial aid policies to fit the needs of the potential as well as the actual college student. A policy of student financial assistance in higher education which attempts to financially equalize the burden of educational expense is essential where the philosophy of education is one of equal opportunity. The time is ripe to seek such a goal.

Having pointed out that the family's economic situation can be a serious deterrent to higher educational aspirations, let me examine areas where educators may either act or influence action to the betterment of this situation. As I see the situation, there are three major sources to which we may turn for assistance to improve the educational purchasing power of the disadvantaged youngster: government, higher education, and private enterprise. For the balance of this paper I would like to assign a role to each and describe how these roles can be carried out in a harmonious fashion between all three parties.

Government's role I shall discuss first, because in my judgment it should be of such a dimension and so timed as to be the focus around which other action programs can be built. Government—local, state, or federal—must, by virtue of its remoteness from individuals, act in a massive way if it is to hit the people its programs are designed to benefit. The form of government action most needed to improve the educational purchasing power of the disadvantaged is a program of scholarships. Such a program should be so designed as to complement, not replace, existing efforts; it should be aimed *exclusively* at the underprivileged; its timing should be much earlier than any existing programs; its grants should vary in size and go only to very needy students and only in modest amounts; it should be administered by states and not by colleges nor centrally by the federal government; its selection techniques should be as comprehensive as necessary to uncover youngsters overlooked in present programs. This kind of program would be a natural extension of existing government efforts (i.e., NDEA loan program, state scholarship and loan programs) and those being made by corporations and colleges. Of first importance, then, is a government scholarship program with sufficient safeguards to assure that the really needy student will be encouraged and assisted to seek a higher education.

The college's role is most crucial in this situation. Through the college we individualize our approach to the problem of increasing educational purchasing power. College resources are sizeable and have a unique diversity. Currently they are administered in a fashion which is not particularly beneficial to very

needy students. The student with little need gets a scholarship; the student with modest need gets a scholarship and a job; the student with great need gets a scholarship, job, and loan. The awarding of scholarships to students of little need so dilutes the institution's scholarship resources that the really needy student must be overlooked. What should happen is that those with small need should be offered a job or loan, those with modest need should receive a job and a loan, and only those with high need should receive a grant or scholarship, and this only in an amount which will raise individual purchasing power to a point where the assumption by the individual of work and loan will seem to him both reasonable and practicable. This reordering of award practices, particularly as it pertains to scholarships, I contend, would be extremely beneficial to the very needy student because it would extend college scholarship resources to a point where many more students could be assisted than is now the case.

Private enterprise already gives considerable money for student aid purposes, mainly in the form of scholarships. Much of this money goes into openly competitive programs from which only a few students benefit but from which the sponsor receives considerable pleasure and favorable recognition. The time is not too far off when these companies and organizations will begin to wonder whether their efforts warrant continuation because of increased state or federal efforts. They do, but probably not in the form in which they now exist. There is a future greatness in store for the student aid efforts of private enterprise if they are concentrated largely on meeting the needs and raising the aspirations of employees and their dependents, and not on efforts to compete with each other for the pleasure of helping a few bright students, usually of fairly privileged circumstances, to go to a handful of colleges. Any corporate program that goes out of existence because of new efforts by government overlooks two things: the government's intent, which in the words of President Kennedy is "to supplement and not supplant," and the vast needs for student aids that will never be met by government and college programs alone. As with the college, the corporation is close to many people needing this kind of aid and encouragement, and it behooves the corporation to take advantage of this opportunity to help solve this serious problem.

Here, then, in summary is my thesis. Money or the absence of same is a serious damper on college plans. The efforts which educators can and should make in this regard, with the hope of effecting rapid betterment, must be directed at improving the educational purchasing power of the very needy student. Efforts by educators should be directed toward government, private enterprise, and toward their own institutions. From government we should expect and demand massive efforts of modest benefit to many in the form of scholarships or grants for the very needy; from corporations we should encourage help for employees and their offspring in the form of grants, loans, and excitement about college going; and from colleges and universities, an approach to the problem that reverses the present narrowness of perspective in the utilization of funds.

NOTE: Chairman of this group was CLYDE VROMAN, Director of Admissions, The University of Michigan; the recorder was LUCILE ALLEN, Educational Consultant, Austin College and Hogg Foundation; the resource person was PETER P. MUIRHEAD, Director, Financial Aid Branch, Division of Higher Education, Office of Education, U. S. Department of Health, Education, and Welfare.

The Most Effective and Helpful Means of Educating and Dealing with the Increasing Number of Foreign Students Attending American Colleges and Universities

JAMES M. DAVIS

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President, National Association of Foreign Student Advisers

WHAT IS SO DIFFERENT ABOUT means appropriate to educating foreign students from those which we apply to all students? Answer—they are foreign. They have succeeded in a different educational system in a different cultural environment and now they must succeed here in this system in this environment. Consider the use of books and lectures. The South Asian has learned to note with great care the lectures because books are scarce and the meat of the course is transmitted through the lectures. The continental European has learned to read widely because the examinations will be based upon the literature and he will adopt a casual attitude toward lecture attendance and content. It was unfair, says the South Asian, for the examination to include a question which was not covered in the lecture. It was unfair, says the continental European, for the examination to include a question which was covered *only* in the lecture.

Let us look at three problems which concern institutions of higher education and foreign students.

The first problem is the English competence of these students. English language competence is not hard to assess. No less than five different tests are listed in a recent bibliography published by the National Association of Foreign Student Advisers. Several scholars are now working on prognostic tests which will assess the potential ability of a student to learn a foreign language. Several institutions, including my own, and the International Cooperation Administration are administering English examinations in the home country prior to admission, using appointed proctors. The larger institutions also routinely test English competence after the foreign student arrives and prescribe remedial courses and reduced academic loads as indicated by the test results.

It has always seemed strange to me that colleges will offer beginning courses in a dozen languages for credit, but will somehow balk at giving credit to a

student who already knows one or two or three of those languages but who needs fairly advanced instruction in English. Stranger still is the tendency to use introductory freshman composition courses as the remedial program for the foreigner. These courses are quite advanced if viewed as foreign language instruction. The foreign student needs a very high foreign language (i.e., English) competence indeed if he is to succeed in his academic program.

It may be inefficient for the colleges enrolling the smaller numbers of foreign students to justify offering effective and helpful programs in English as a foreign language. Perhaps they should require greater English competence as a condition for admission and refer those students whom they cannot admit to any one of the dozen or so universities offering intensive programs in English as a foreign language. But many more colleges could add to their English faculties a person trained in teaching English as a foreign language, filling out his teaching load with other courses which he is competent to teach and/or making him a part-time foreign student adviser.

Everybody—faculty members, foreign students, and counselors—would be happier if each institution screened students for English competence prior to admission, tested them upon arrival, and prescribed and offered adequate remedial work.

The second problem has to do with admissions. When I talk with admissions officers in smaller institutions, I sometimes wonder whether they have ever heard of the excellent World Education Series of the American Association of Collegiate Registrars and Admissions Officers, or, having heard of them, whether they have bothered to get and read these simple and extemely helpful publications. The country-by-country studies in this series are coming out rather slowly, but the two basic books are extremely useful to the admissions officer in the smaller institution. These are Strain's *Do-It-Yourself Evaluation of Foreign Student Credentials* and *A Guide to the Admission and Placement of Foreign Students.*

The assessment of foreign academic credentials is not a difficult process, but the admissions officer does not have to work alone. He can use the nearest large university as a consultant. He can use the U.S. Office of Education, which operates a most helpful service to advise colleges on foreign credentials.

Most colleges have no coherent plan for relating themselves to foreign students. They select those admitted in a fairly haphazard and unplanned way from the ones who happen through some way or another to apply for admission. Colleges should consider what kinds of foreign students they want; in which fields of study; from which countries. They should develop processes to secure the students they can best educate and who can make the most fruitful contribution to the college.

Problem three is evidenced whenever faculty members relax enough to admit in informal conversations that they are uneasy about the processes of examining and grading foreign students. The courtesy "B" and the foreign student "C" are not confined to second-rate institutions; they are a mark of human frailty and faculty compassion. Professorial uncertainty in these matters is derived from a legitimate doubt about just what they are measuring in their examinations. Given a class of American students of about the same age, the two factors of English competence and skill in taking examinations can be dis-

counted because the students can be expected to have fairly homogeneous backgrounds in these respects. Not so with foreign students. It is extremely hard to determine how much subject matter they have learned without simultaneously testing their English competence and their skill in taking the particular type of examination given. And many professors forget that the so-called objective type of examination is rarely used abroad.

After a semester or a year in an American college, a foreign student should be expected to perform comparably with Americans in these respects, but more flexibility is needed in the early phase of his experience. The teacher can surely develop special examining procedures which measure the student's intake of subject matter without also measuring at the same time his English ability and his examination-taking skills. Our colleges must beware of a dilution of standards, however, that would send home graduates who do not have adequate preparation in their fields of study, or who have low-standard degrees. Great harm is done abroad when such students return, for the whole of American education may thereby be considered as second-rate.

In her 1955 book on *Foreign Students and Higher Education in the United States,* Cora Du Bois approaches a discussion of administrative arrangements with this statement:

> The essential components of any effective program, as contrasted with isolated cross-cultural education, seem to be realistic and precise goals, on the one hand, and continuity on the other. The importance of continuity is particularly evident from still another point of view. As yet, there can be in the execution of educational exchange programs no substitute for experience . . . The educational institutions of the United States have an obligation not only to set a clear and explicit example in this respect but also to assist those who are dealing in public or private programs to give careful thought to consistent long-range planning.

As I view colleges and universities in their dealings with foreign students, they appear to be long on continuity but short on planning. If long-range planning is hard to find, is it possible that Du Bois is wrong? I have seen a number of college self-studies in recent years, but I don't recall any which set forth the purposes, policies, and functions of a college in its international services. It may be that Du Bois' admonition to develop realistic and precise goals, and plans for achieving them, is more appropriate for national operating agencies in the educational exchange field than it is for individual colleges and universities.

Planning requires time which must be diverted from other activities and a large component of knowledge and experience. But I would like to take a firm position in agreement with Du Bois that planning is a good thing. More of it should be tried. Realistic and long-range goals should be set and processes should be developed to achieve them. Continuity is achieved in part through the adoption of long-range goals clearly stated in specific documents. These should be used as a basis for specific program planning and staffing. Continuity of personnel is also required. I heartily agree with Du Bois that there is no substitute for experience, provided that the experience is cumulatively educative. Colleges can better deal with foreign students if they take a little time to record their experiences, to accumulate these records and analyze them, and to seek in them clues to better policies and practices.

Finally, how can the institution "deal with" foreign students through the adviser? Continuity is of great importance in this position. It is a function which is best done with delicacy and dedication; with an up-to-date and effective knowledge of the complexities of immigration regulations, governmental agencies, currency regulations, and cultural differences. Much of this knowledge is readily at hand in the publications of the National Association of Foreign Student Advisers and the Institute of International Education. Much more of it is acquired in the intimate and subtle counseling interviews with foreign students.

This adviser should be the institution's specialist in international education. He should be a member of every committee which is considering international affairs, especially in the smaller institutions. In these, he can often be most useful if he handles all initial inquiries from foreign students, processes each admission of a student from abroad, arranges orientation programs when the new students arrive on campus, advises them and the administration concerning their housing arrangements, reports their arrivals and departures to the immigration service, shares in their academic advising, clears their requests for part-time employment, advises their social groups and activities, administers their loans and scholarships, handles their discipline problems, arranges their speaking dates and tours into the off-campus community, and prepares an occasional alumni letter for them.

An effective foreign student adviser needs adequate secretarial help and an efficient office in which to work. Fifty students constitute at least a one-third time load; 100 require about one-half time with a full-time secretary; a full-time adviser with a full-time secretary and some paid student assistance is recommended for each 200 students. This adviser must be a person who believes in the values of this program sufficiently to take his time to meet with committees and attend social functions on many evenings and weekends. He should have faculty standing and do at least some teaching in the field of his academic competence.

Investment by the institution in this kind of person will pay large dividends in international service. The American students will learn from their associations with the students from abroad; the college will establish a reputation as a modern institution which is aware of its wider responsibilities. It will be seen as an effective force for community education in world affairs. It will attract volunteers of high standing to the support of its international student programs. It will gain national acceptance as a leader in education and service.

NOTE: Panelists for this group were CECIL R. CRUMP, President of Student-Faculty Council, Wayne State University; CHARLES C. HAUCH, Specialist, Comparative Education, Western Hemisphere, Division of International Education, Office of Education, U. S. Department of Health, Education, and Welfare; and MYRON H. VENT, Chairman, Inter-Agency Working Group on University Relationship, International Cooperation Administration. Moderator of this group was RICHARD A. HUMPHREY, Staff Associate, American Council on Education; the recorder was PAUL C. GREENE, Director of Student Counseling, University of Illinois.

Identifying Early the Potentially Good College Teacher and Encouraging Him To Enter a Career of Scholarship and Teaching

KENNETH I. BROWN

Executive Director
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IDENTIFY. ENCOURAGE. May I be allowed to add a third word and a brief prelude? The third word is Recruit: Identify, Recruit, Encourage. It appears to me that encouragement is needed both after the identification and after the recruiting. And by recruiting I mean not a definite commitment to teaching but a decision to consider seriously the vocation of teaching.

Therefore, I suggest: Identify, Recruit, Encourage. And the prelude?

As a profession we teachers have been peculiarly hesitant to speak in behalf of our vocation. We have rather consistently undersold scholarship and teaching, as if somehow we were embarrassed. And when we have spoken out to the young who might consider teaching as a career-calling, so often we have spoken in the mood of self-pity, of apology for poor salaries, or inadequate public recognition—although perhaps the fresh academic leaven in Washington may counterattack that vocational shame.

"Our progress as a nation can be no swifter as a nation than our progress in education." These are the opening words of John Fitzgerald Kennedy's message to Congress on education. If we believe them, then our work must assume a larger measure of significance in our own eyes, and with justifiable pride we should speak to the talented young man or the academically able young woman of the disappointments and the hardships—yes; but also the rewards, the satisfactions, the joys of the academic life, wherein the teacher takes his part, according to our youthful American President, in the national program of American progress.

What are we looking for in our identification of potentially strong candidates?

He who would teach well must have three loves: the love of scholarship, the love of the inquiring mind and the person behind the mind, and the love of the learning-teaching process which we may call the activity of communication. It

is not impossible to identify the occasional genius in the teaching profession whose make-up may not possess all three devotions in substantial measure. But genius appears infrequently, and in dealing with far-ranging professional needs we do well to assume that most of our "recruits" will belong, like ourselves, to that great majority of the "dedicated average."

We must seek, therefore, young men and women who love learning and who reach out in friendly concern to the seeking mind—and also the mind which, if properly awakened, can be encouraged to seek. And in addition we must look for the young person who is aware or who is willing to be made aware that learning alone is not enough, and that friendly concern alone is not enough; that in addition, there must be competence in communication between the more mature and the less mature, and more learned and the less learned mind-heart-spirit. Communication is a skill to be learned and an art to be disclosed through appreciative seeking. For the teacher of all levels, that art-skill, whereby mind speaks with easy communication to mind, and heart touches with warm communication the heart, is a very important asset in his vocational fitness.

There is an additional item which deserves brief comment. In spite of the materialism of our day and the youthful search for security and assured happiness, there is, in contradiction, an eager outreach on the part of many college students for a vocation which promises an opportunity to contribute to human welfare. "A career of service" is a goal in the minds and hearts of many young Americans, even though *idealism* has become a despised word, and one speaks not of *ideals* but of *values*.

In our endeavor to *identify* the young man and woman who may have the abilities and the attitudes of a successful college teacher, there is no reason for us to belittle the element of human service within the teaching profession. Why should we not speak with pride of teaching as a career of service, however far we ourselves may have fallen from the achievement?

How early shall we think of the dual approach of "recruitment—encouragement"? In the Stecklein-Eckert study, "How University of Minnesota Faculty Members Became College Teachers" (1958), approximately two per cent gave initial consideration in elementary or junior high school; five to six per cent gave initial consideration to a career of college teaching in senior high school; approximately eighteen per cent by the end of their college sophomore year. It is certainly not too early, in adolescence, to expect the high school vocational counselor to offer college teaching—or at least teaching per se—as a career possibility; nor too early for the wise teacher to be looking for potential ability and, where reasonable, to sow seeds of expectation and hope.

But—recruitment and encouragement: How does one begin? Very briefly may I consider that responsibility as the heritage of three groups: 1) the individual teacher who believes heartily in the present and the ultimate importance of the career he has chosen; 2) the administrator whose position gives him an over-all view of educational organization and therefore a different responsibility from the individual teacher; and, 3) the larger groupings, such as the National Education Association, the American Council on Education, the Association of American Colleges, other educational groups, and educational foundations, as well.

The strongest and best form of recruitment is the direct word from the man

in love with his job to the student who may some day succeed him: "Have you ever thought of college teaching as a career?" (And as an aside, every teacher will wisely see the need not for one successor but for a score of successors!) That direct vocational witness to our pride and joy in teaching is hard—hard for many reasons which together bulk large in educational thought: It seems to make us evangels and we fear evangels and missionary approaches; it appears to violate our academic virtue of objectivity, so highly cherished; it suggests the intrusion into another's privacy; it goes against the polished grain of those of us who hold membership in the cult of disinvolvement, or the sect of disentanglement, so popular on many campuses, where the junior chapters for students have sprung from the senior chapters for faculty members. Nevertheless, if there is to be identification, followed by recruitment and encouragement, there must be the personal witness of a teacher-generation to a student-generation.

One question asked in the application for appointments as Danforth Graduate Fellows is this: What influence brought you to your present decision to be a college teacher? There are many answers each year: love of academic community, enjoyment in learning, some awareness of ability in exposition and academic dialogue. The answers most frequently given are: 1) the inspiration of one or two college teachers; 2) Professor "X," who showed me the satisfactions and the services of teaching; and 3) the encouragement and example of Professor "Y."

As far as I am aware Future Teachers of America is limited by constitution or by local leadership very largely to students intent on elementary or secondary teaching. In any case would not the administrator be wise to encourage the formation of still one more campus group of young men and women looking to college teaching, and provide for them the kind of encouragement that our premedic and prelaw groups receive? From this precollege teaching organization will come those students, qualified by maturity and academic achievement, for use as substitute instructors in elementary courses, assistants to the professional staff. One of the best ways to encourage the able student to consider teaching as a vocation is to offer him some limited opportunities to try his hand at the art, and be in on academic discussion.

Certainly one most profitable effort on the part of the administrator is to make certain that somewhere in his organization, some faculty member or staff officer has both time and responsibility for heading up *all* information on graduate assistance for both students and faculty. Haverford College may still be following its earlier pattern of relieving an able instructor of one course, during the first semester, that he may provide this important service to the campus—informing the college community of available fellowships as offered by Ford, Woodrow Wilson, Rockefeller Brothers, Fulbright, Danforth, and other organizations in this field. Some institutions are doing a splendid job in this area of encouragement, whereas others seem inclined to conceal rather than reveal what they may know about available fellowships. If the college teacher-to-be must continue to face three to five or six years of graduate study for his doctorate, administrators and teachers must often help the promising student to locate financial aid.

Then finally there are the efforts which educational organizations or groups of cooperating colleges in educational foundations can undertake in this area of recruiting and encouragement.

Recently there has been considerable interest in workshops and summer seminars for improving college instruction. Personally, I am much interested in seeing some program of teaching clinics, where the procedures of classroom teaching can be reviewed and criticized—and hopefully improved. I mention it here only to suggest that carefully chosen college students seeking opportunity to learn more about college teaching or to see it in action might very possibly be invited to membership in such workshops, and seminars, and teaching clinics. Indeed they might serve as the classroom members in the clinics for the teacher under observation.

One final suggestion: I wish that we might provide across the country a series of regional weekend conferences on college teaching as a vocation, to which carefully screened college students would be invited, to be faced realistically with the demands and the rewards, the tribulations and the joys of that calling we know to our profit. Something of the sort was instituted in the middle of the last decade and met with fair success.

But eventually the responsibility comes back to the individual teacher. Identify, Recruit, Encourage: Until we *as teachers* can speak enthusiastically *about teaching*, until we can "sell" to another, by word, example, and deed, that calling which for us is the greatest of all vocations, then identification will lag, recruiting will falter, and encouragement will become discouragement.

NOTE: Panelists for this group were JOHN W. GUSTAD, Dean, College of Liberal Arts, Alfred University; JOHN E. STECKLEIN, Director, Bureau of Institutional Research, University of Minnesota; and JOSEPH V. TOTARO, Director, Teacher Placement Bureau, The University of Wisconsin, on leave as Specialist for Staffing Higher Education, Office of Education, U. S. Department of Health, Education, and Welfare. Moderator for this group was FREDERIC W. NESS, Vice President, Long Island University; the recorder was PAUL A. FITZGERALD, S.J., Assistant to the President, Jesuit Educational Association.

Responsibilities of the Individual Faculty Member and His Institution for Increasing His Teaching Ability and Professional Stature

JEREMIAH S. FINCH

Dean of the College
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A FACULTY MEMBER of Barnard College, speaking of the leadership of President McIntosh, once said to me: "She has made us feel free to do our best." This remark made a strong impression on me, for in my uncomplicated view of this very complex subject, it is the ultimate responsibility of the individual faculty member to do his best as a teacher and as a professional person, the ultimate responsibility of the institution to make him feel free to do so.

Let us separate some of the elements of this packed topic. Teaching ability: Yes, of course, there are many ways one can increase his teaching ability. There is much to be known about the learning process, about student reaction, about laboratory methods, about techniques of presentation in the classrooms, lecture hall, and small discussion groups. Anyone who truly *wants* to do his best will make it his business to increase his ability by learning everything he can from colleagues, from observation, and from experience. The responsibility, however, lies deeper than this. It is, first of all, to recognize what teaching is. How many well-meaning teachers fail in their mission because they confuse (as does the lay public) teaching with the transmission of knowledge or with indoctrination! Of course, knowledge must be transmitted. Cardinal Newman long ago made it clear that there must be substance to be worked on before the mind can usefully be at work. Similarly, there must be a kind of indoctrination. For example, the teacher of English needs to assert the importance of clarity in written communication. But neither of these is at the heart of teaching. The teacher wanting to do his best will have discovered that there is a larger aim—that of awakening the interest of the student, of bringing him to react and to delight in the use of the mind, to enjoy the process of gaining information in order to follow ideas to see where they lead. The true teacher will accept this as his responsibility—to increase his capacity to lead the student

through his subject, not merely to know, not merely to parrot, but to use his mind and to feel comfortable in doing so. Every technique, every device, every visual aid, every bit of student reaction, every bit of experience gained by himself and others the teacher will interest himself in—not for its own sake, but so that he can more effectively magnetize young minds and give them that electric current of curiosity and questioning that is the precious possession of the truly educated man.

But what about the other half of the responsibility, that of the teacher's professional stature? The one is involved in the other. "Professional stature" means not merely the estimate of others in terms of published scholarship, but the stature of a man viewed in all the dimensions of teaching, and this is not separate from but actually includes what we call research or scholarship. Attending professional meetings, answering questionnaires (or framing them—a greater sin), serving on committees, intervisiting, reading articles in educational journals, and all the other superficial and tangential aspects of growth as a teacher and as a professional person may be necessary, but are not essential.

Professional stature is a larger matter. It is interlocked with the idea of teaching, in its broadest sense. It means growth, scholarship, rightly defined. Every good teacher knows, down deep inside, that the desire to teach and the desire to learn are not separate, that the two are together in us and should be fostered as complementary and interacting forces. I become impatient with those who perpetuate the myth that somehow teaching and scholarship—that is, learning—are separate things and in conflict. They are not. If a teacher is alive intellectually he will inevitably be by inclination a learner; that is, a scholar. Whether he puts himself through the discipine of publishing the results of his scholarship is less important than the activity of exploring, of looking further and deeper than other men (though many who are scornful of publishing might profit from the exacting demands of the printed page). It has been said that the teacher who is no longer learning is not fit to teach others to learn, that the student should be drinking from a flowing stream, not a stagnant pool. Conversely, the man who is a learner and publishes the results of his learning is also a teacher, for he is teaching a wider audience of students—those other learners throughout the world who share his interest and in turn have their own students, so that there is a widening circle of influence.

Once in a while a young man will say to me, "I want to go into college teaching." I always ask, "Teaching what?"—because there must be an interest in the subject to be taught if any teaching is to take place. This can be the art of reading or simple arithmetic in that very different level of teaching, the first and second grades; or it can be symbolic logic or biochemistry at the postdoctoral level. It is all teaching; it is teaching human beings, not just "teaching" in a vacuum.

Thus, professional stature is but an aspect of the larger responsibility of the individual faculty member—not to be entered into lightly—to do his best to be a teacher-scholar, whether his teaching takes place on a log or behind a microphone in a lecture hall; whether his scholarship results in many volumes of wide influence or simply in valuable insights that are communicated to colleagues and to generations of students.

Then, there is another, deeper responsibility, and that is to be a good human being, with imagination, warmth, and compassion. I cannot profess wisdom about this oldest of human problems; I can only emphasize it and hope that we teachers can be good men in the eyes of other men and of the Almighty.

I have purposely written here at some length on the responsibility of the individual faculty member, because the institutional responsibility seems to me to be clearly implied by what has been said about the individual. Putting it very simply, the responsibility of the institution is to create an atmosphere in which the faculty member can work effectively. Good educational leadership will nourish the true spirit of teaching as something more than knowledge-cramming, or indoctrination; it will foster good teaching as part of the fiber of the place and give it the recognition and support it deserves; it will identify the man who is growing and developing as a teacher, and encourage him in his growth and development. Easy to say, harder to do. It takes a strong and persuasive college president to see to it that in departmental promotions more than the publishing record counts, and the battle has to be fought constantly and vigorously. Yet, this is not enough. The institution must help to attract students that are interesting to teach, must shape curricula, provide facilities that make teaching attractive and fruitful, and establish and defend aims and objectives that will invite wholehearted support and enthusiasm.

But it is also the responsibility of the institution to encourage the advancement of learning. How can any true education be taking place in an institution where learning is sterile and not advancing? Creating and enhancing the environment in which scholarship can flourish is a challenging and expensive task. It involves more than leaves of absence, reduced teaching loads, laboratory and library resources. It means building a faculty of kindred spirits who share the excitement of scholarship as they share the rewards of teaching. It means that the man with the unusual, thrusting mind must not become lonely.

A new but pressing problem has arisen with the growth of sponsored research. Here emerges another, new responsibility: to establish the goals and the place of such research within the framework of the educational aims of the institution, to keep the dimensions of such research in balance so that outside support of research does not damage the integrity of the institution in doing its best job.

Perhaps the fundamental responsibility of the institution is to husband wisely its resources in able men. Talented teacher-scholars are needed everywhere, and higher education must give increasing attention and effort, not only to recruiting and encouraging new ones, but to supporting those we have—one of the most important sources of strength in our nation. It is the solemn duty of the institution to sustain them in their work, to encourage them in their aspirations, and to "make them feel free to do their best."

NOTE: Chairman of section 1 of this group was ELDON L. JOHNSON, President, University of New Hampshire; the recorder of section 1 was GLENN S. DUMKE, President, San Francisco State College; the resource person for section 1 was MARK FURSTENBERG, Student, Oberlin College. Chairman of section 2 was DONALD F. DRUMMOND, Associate Professor of English, University of Missouri; the recorder of section 2 was JOHN H. DALTON, Assistant Professor of Economics, University of Maryland.

Goals, Practices, and Procedures for Implementing Joint Responsibility for Institutional Policy Formation and for Instructional Evaluation and Improvement

FRED HARRINGTON

Vice President for Academic Affairs
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WHO RUNS OUR COLLEGES and universities? Who sets broad educational policies in higher education? Who controls the curriculum? Who decides on our basic goals and procedures? Is the present setup satisfactory, or should it be radically changed? And if it should be changed, how should it be changed?

A good place to start is with the faculty. Policy decisions on instruction and other educational matters obviously involve joint responsibility. The governing board, the administration, the faculty, even the students must share in that responsibility. So must the general public, as a whole and through such special groups as the alumni, foundations and private donors, governors and legislators, the President and Congress. In other words, everybody is in the act. But when it comes to instructional evaluation and improvement, when it comes to establishing long-range goals, the question of faculty power occupies a central role.

What is the present picture? Enrollment is increasing everywhere, and the great upsurge is still ahead. There are more professors to teach these extra students—but not enough more professors. To make things worse, faculty members are trying to do more with today's students: to provide better counseling and guidance; to give special attention to superior undergraduates; to supply the cross-disciplinary offerings which the modern world requires; and to increase graduate and postgraduate training.

Nor is that all. While handling this heavier teaching responsibility, faculty members are expanding their research activities to an almost unbelievable degree. There has been much talk about the enrollment increase of the 1950s, and the doubling of enrollment in the 1960s. This we call a tidal wave. But it is at most a tripling or quadrupling of enrollment in the twenty years from 1950 to 1970. And with these twenty years half gone, research has already more than quadrupled at our leading colleges and universities. It is likely to quadruple again

before 1970. Since most professors want to teach as well as do research, this has made busy professors still busier.

Finally, faculties are coming to recognize another responsibility—for adult education. In this changing universe, continuing education is the one alternative to obsolescence or something worse. Self-study helps but it is obvious that the faculties of colleges and universities are urgently needed if we are to carry forward the developing national program of institutes for professional people, refresher offerings, education for citizenship and international understanding, and all the rest.

If professors are busier than ever before, how can they find time to help with policy decisions? Can we blame them if they become impatient with heavy committee assignments? Can we object if they want to concentrate on teaching and research, and "leave the rest to the deans"? Can we expect faculty members to understand our increasingly complicated universities? Must we not put heavier reliance on full-time administrators, trained to handle the baffling problems of our growing institutions? Or on outside efficiency experts?

Many are thinking along these lines. Some approach the question from a cost viewpoint. Our booming institutions of higher education are costing a fantastic amount of money. How can we handle these expenditures? In his widely distributed *Memo to a College Trustee*, Beardsley Ruml says flatly that governing boards must take control of curriculum away from the faculty. Ruml argues that professors can be trusted individually but not collectively; that trustees and administrators can make colleges run more efficiently by regulating size of class, type of instruction, and the like. The faculty, shorn of its power in this key area of instructional improvement and evaluation, will be rewarded by the higher salaries which will be made possible by the new efficiency of management.

These developments make it proper to pose three major questions.

Question one: Will enrollment increases force major changes in the internal government of our colleges and universities?

My answer: Yes, but in making these changes we must not eliminate the faculty from a strong role in policy making. We must protect our professors from burdensome minor administrative assignments involving routine detail work—thus leaving them free to help in tackling major policy questions.

Question two: Is faculty power on the decline because of the increasing number of full-time administrators and because busy professors want to "leave it to the deans"?

My answer: Probably, for these and other reasons. But there are encouraging signs of faculty interest in and contribution to handling the big decisions in higher education. We must do everything we can to increase this interest. It does not hurt presidents and deans to have faculty members interested in institutional planning; rather, it strengthens the administrators and provides them with assistance they badly need.

Question three: Is Beardsley Ruml right in urging governing boards to seize control of over-all curriculum planning, in the interest of efficiency and higher faculty salaries?

My answer: No. There are many first-rate ideas in the Ruml book. He is certainly right in saying that the members of governing boards should pay more

attention to broad educational policy, and less to minor administrative details. Governing boards are a vital factor in the future of our colleges and universities. We need their ideas, we need their help at every turn. But they should not reduce faculty power. Rather they should meet with faculty groups as well as administrators. Only in this way can American higher education properly define its goals and assess its practices and procedures. Only in this way can we get the necessary joint responsibility for institutional policy formation and for instructional evaluation and improvement.

Because of mounting responsibilities and rising costs, we must analyze our institutions more carefully than before. Realization of this need has produced offices of institutional studies or their equivalents at nearly all our larger colleges and universities. Simultaneously, there have appeared various commercial survey organizations and management consultants available to provide advice on higher education. This poses a fourth question.

Question four: In studying curriculum and other matters of academic concern, should institutions of higher education rely mainly on self-studies or on outside surveys?

My answer: We should rely mainly on self-studies. Sometimes outside surveys are necessary or useful. Higher education should recognize, however, that it can and must do most of the job itself. We must develop on our own campuses methods of achieving economy and efficiency without impairing quality. This is necessary, for we must make the best possible use of the limited funds which we will have available for the gigantic jobs ahead.

Question five: Should we enlarge the student role in curriculum planning and other academic policy decisions?

My answer: Yes. We do not want our students to take charge, as students have on occasion in Turkey and Korea and some parts of Latin America. But students do have ideas, they do see the problems of higher education from what we may call the working level. There is a good deal of evidence that American undergraduates are more serious minded, more thoughtful, more interested in educational questions than ever before. Granted, students lack the background of experience possessed by most professors, administrators, and board members; but they do have enthusiasm and new points of view. To be sure, student officers and student generations change so rapidly that we cannot count on much continuity; but faculties and governing boards are always changing, too. We should make better use of the students than we do when we try to evaluate and improve instruction. We should include them more often than we do in the joint responsibility for policy planning. By doing so, we will contribute to the future success of higher education.

NOTE: Panelists for this group were MILBURN P. AKERS, Editor, *Chicago Sun-Times;* KENNETH E. HOWE, Dean, School of Education, The Woman's College of the University of North Carolina; RICHARD A. RETTIG, President, U.S. National Student Association; and JAMES D. THOMASON, President, Assembly of Student Government, The University of Chicago. Moderator of this group was WILLIAM STUART NELSON, Vice President, Howard University; the recorder was DONALD WESTERN, Professor of Mathematics, Franklin and Marshall College.

Constructive Ways in Which the Effectiveness and Ethics of the Academic Market Place Can Be Improved

REECE MCGEE

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IT MUST INITIALLY BE NOTED that there is not one market place for the whole of higher education, but *three* or even more. The manpower market for the major universities is a different one from that patronized by the lesser universities and better liberal arts colleges, and both of these are different from that where men are traded by the lesser colleges, state colleges, normal schools, and junior colleges.

Judging from my own experience and study of the market practices of the major universities, I must hazard the opinion that improvement in their ethics is probably not possible on any large scale and in any event is least necessary there since, in general, the greater universities deal with people more humanely and more honestly than smaller institutions are apt to do. The reasons for both of these states of affairs are mainly organizational. The major universities of the nation are almost exclusively associations of professional scholars with strong ties and orientations to their disciplines. All personnel transactions, hence, are essentially disciplinary transactions, and are strongly colored—while not entirely dictated—by the relatively open, agreed, and universalistic criteria of professional competence. (This is not to say that men are not sometimes treated very badly or that judgments are always rendered with objectivity and impartiality—Theodore Caplow and I have devoted a work in part to just that subject. It is to say, however, that the ethics directing market transactions are probably most forthright and best observed among the major universities.) The strong disciplinary-professional orientation of these institutions, however, makes any change in ethics improbable of achievement. Present hiring and personnel practices are rationalized as maximizing disciplinary values and are viewed as actually representing the ethics of the disciplines so that suggested modifications are interpreted as affecting the disciplines and are generally resisted. Further, for the major universities the present system works with relative efficiency in that

it permits most departments to secure candidates of their first choice and there is no reason to believe that this fact will change in the future. Compared with *this* significant accomplishment any inefficiencies or inequities in the system seem relatively inconsequential to the men of the major universities.

On the level of the minor universities and better four-year liberal arts colleges, some planned improvement in market ethics is probably both feasible and desirable. It is apparent from study of the graduate placement practices of the major universities that at least one problem of minor institutions lies with them and has to do with market place ethics. This is the tendency on the part of the major institutions to pass candidates relatively unsuccessful by their standards to the lesser institutions without honestly evaluating them for the hiring department. This is particularly damaging—to the institutions involved in the transaction as well as to the individual—in cases where the hiring minor university is seeking the same qualities in its staff as are sought by the placing major university, although perhaps in somewhat lesser degree (i.e., the hiring school *also wants* professional competence, the probability of publication of scholarly works, etc.). Thus a new Ph.D who is deemed suitable for placement at Siwash State University by Harvard—although, of course, not good enough to be retained at Harvard itself—may find himself deemed equally unsuited at Siwash. A similar situation occurs when a candidate who has been unable to meet research requirements at a major university is hired by a liberal arts college and finds himself too professionally oriented to meet the teaching and service requirements there.

These are ethical problems in that they arise in part from institutional unwillingness to state explicitly what is sought in staff members, or what qualities they possess, and in part from institutional inability to face realistically what they are likely to get and why. Together with the desire to get something for nothing from the major universities, they probably account for many of the ethical problems to be found on this level. Since all three of these types of problems are found in more extreme forms among the third level of institutions, the so-called Bush League schools, let me discuss them and the possibilities for their alleviation in that connection.

Speaking solely from my own experience and observation in "the Bush"—and not from any systematic study of it—I can guess that the major ethical problem of market place relations there is that many of its top administrators, principally presidents and deans of faculty or instruction, frequently stretch the truth, at least when it comes to hiring staff. That they do is not surprising and should not, perhaps, be held too much against them considering the problems of finance and staffing they face. But it is a shortsighted tactic which in the long run only further aggravates their troubles while embroiling others in them. The institutional problem, of course, is that of rising enrollments, skyrocketing costs, inadequate finances, and severe shortages of qualified staff. In order to get anyone better fitted to teach than some of their own recent graduates, it is often necessary to present the institution in the most favorable of all possible lights—an illumination which sometimes distorts reality completely. Candidates may be wooed by neglecting to mention undesirable aspects of institutional practice or environment or by unwillingness to state explicitly the qualities sought, by inference

from which the candidate might draw unfavorable conclusions (e.g., "ability to integrate with the community"—a favorite requirement—may disguise a compulsory membership in the local Chamber of Commerce and the expectation that the professor will be always available for speaking engagements, water bond drives, social events, etc.). The desire to get something for nothing leads many "Bush" colleges to seek candidates from far superior institutions who, if they can be persuaded to accept the position by glowing tales or salaries far out of the usual line, are almost invariably disenchanted shortly after arrival. Inability or unwillingness to assess realistically the actual circumstances of the college also often leads administrators to hire men who cannot reasonably be expected to remain satisfied there and thus, like "something for nothing," lead to excessive turnover, intrafaculty strife, and, not infrequently, revolt.

Perhaps the most unethical situations in higher education of which I have ever heard are the products of faculty unrest produced exactly in this way: the hiring of men too well trained or too professionally oriented by a "Bush" school whose administrators were unable to realize the low quality of their own operation. The horror stories are legion: the school in Arkansas where the president opens all faculty mail, the California state college where men are fired without notice for seeking other positions, the Baptist school where smoking or taking a drink is cause for termination. Clearly, improvement in the ethics of the market place is most desirable on these levels of higher education. Its feasibility is somewhat less clear.

It is obvious that exhortation about ethical practices is useless so long as perceived facts about hiring do not demonstrate its utility. The ethics of the major league market place are as good as they are mainly because to depart from them would immediately and obviously damage the department. What is needful, then, among the unethical, is practical motivation for change. Ethical behavior is normally practiced only by those motivated to behave in that way; history demonstrates unequivocally that it is remarkably difficult to enforce upon the unwilling. Unfortunately there seems to be no universal nostrum. Examples are not lacking, however. There are many "Bush" schools noted for their honesty and humanity in dealings with their faculties and (presumably in consequence) for the stabilities of their faculties in the face of heavy work loads and inadequate salaries. It does not seem remarkable to me that some of these schools, at least, do highly creditable jobs of educating their students with a faculty composed largely of dedicated M.A.'s and B.A.'s and only a sprinkling of unambitious Ph.D's. But example is, apparently, not enough. Studies of the high cost of faculty turnover are needed, along with others showing the greater ease of administering a satisfied and dedicated faculty instead of a frustrated and disenchanted one. If adequate higher education is to continue in the "Bush" —and clearly it must, for the universities and better liberal arts colleges can surely not handle the future unaided—the problem must be alleviated immediately.

One of the most outstanding of market effectiveness problems is that of irrationality. During the course of our own *Academic Marketplace* study, Professor Caplow and I discovered great degrees of irrationality characterizing recruitment and selection practices, evaluation and hiring procedures, and even in the

simple day-to-day personnel process in the universities. Perhaps the most apparent of these irrationalities is the fact that almost all academic hiring procedures are ostensibly designed to measure one thing, professional quality, but in fact measure another quite different: professional reputation or prestige. This is only one example; they are in long supply.

A second outstanding problem of the market effectiveness is the general one of faculty turnover. There seems no question that at many institutions this is presently excessive. While some turnover is unavoidable—that caused by death and retirement—and some is desirable—for failures at all levels must be eliminated for the good of the institutions and of education—annual turnovers of twenty per cent of junior and ten per cent of senior men is both avoidable and undesirable. At the major universities turnover is apt to be excessive among junior men as the result of overdiligent or too early application of up-or-out rules which remove hundreds of energetic and enthusiastic teachers from the ranks of their faculties every year. Equally they encourage academic "operators" and "publishing" charlatans to remain. Senior scholars, on the other hand, may be kept in perpetual motion by ever more attractive offers from institutions eager to add their glory to their particular firmament.

I have already suggested that in "Minor League" and "Bush League" schools much turnover may be explained by reference to unethical administrative practice and to the hiring of unsuitable candidates. Probably a great deal more is the consequence of inadequate salaries, overwork, and administrative lack of respect for teachers and teaching.

At whatever level, however, turnover in American colleges and universities is too high. No one has ever computed its costs accurately and probably no one ever can (for its human costs are hidden) but even the cost of it in terms chargeable against the institutional budget should be staggering. So far as I know no systematic attempts to compute it or to study its reduction have been made, but they should be. It seems likely that a few simple and inexpensive remedies, such as the provision of faculty fringe benefits which materially benefit, might do a great deal to reduce it.

The third outstanding market effectiveness problem which I would like to offer for discussion is related to the first, in that it is concerned with rationality, this time with the rationality of the scholar instead of the institution. It is an odd fact of academic life that men professionally concerned with reason are so often highly irrational when confronted with their own job placement. Men accept or reject positions for the sake of geography or climate without inquiry or visit. Particularly among younger scholars a salary rise may be regarded exclusively for its symbolic value with consequent failure to ascertain such important fiscal facts as relative cost of living, housing, heating and cooling, or even taxes or commuting costs. A more general failure, to which even seasoned men sometimes fall prey, is failure to investigate thoroughly the all-important intellectual or social atmosphere of departments and institutions, thus often moving, for example, from an uncomfortable meteorological climate into an even more unfavorable social one. Younger men especially seem to regard job placement as an act of God with which they are powerless to interfere, but faculty members on all levels are beset with feelings of helplessness once the quest

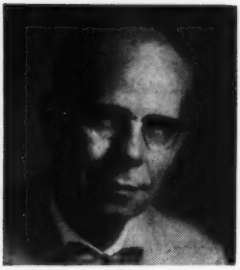
is embarked upon. When a rationally planned and carefully calculated campaign on the part of an individual to secure a particular position is discovered, the man in question is often regarded as a kind of miracle worker which mere mortals cannot hope to emulate.

This attitude does a clear disservice to the job-seeking academic. It makes him prey to his own whims and fancies as well as those less dangerous ones of prospective employers. While no universally applicable blueprint to guarantee successful placement can be devised, it seems probable that some of the following suggestions ought to be included in one: 1) always make a "site visit" to a prospective job, spending sufficient time there to look the institution and city over thoroughly and meet all members of the department; 2) have private conversations with potential peers about their reactions to the department and institution; 3) calculate apparent financial advantages and disadvantages carefully and completely; 4) learn the expectations for behavior which members of the institution and department are expected to fulfill; 5) avoid institutions or departments too different from those familiar from past experience.

These ideas are so simple as to appear simple minded but it is amazing how seldom they are applied. Given the folkways of the academic market place it seems likely that the institution will usually initiate and more or less control the placement process, but the individual's satisfaction with a position once he is placed in it is almost entirely a personal matter and he can seriously affect the probabilities of it by his own actions beforehand.

NOTE: Chairman of this group was LLOYD D. BERNARD, Director, State-Wide Relations with Schools, University of California at Berkeley; the recorder was SIMON ROTTENBERG, Associate Professor of Economics, The University of Chicago; the resource persons were RAYMOND C. LEWIN, Assistant Professor of Education, Montclair State College; and RAY C. MAUL, Assistant Director, Research Division, National Education Association.

Insights from One Profession Which May Be Applied to Educating for Other Professions



WILLIAM J. MCGLOTHLIN

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ISSUES IN EDUCATION for the professions are so numerous and varied that it is difficult to choose a place to start on an analysis of them. In my belief, education for the professions—"professional education" to shorten the phrase—is the most complex and difficult of all forms of higher education. Professional schools cannot be content merely with transmitting knowledge, although knowledge is important to them; they must make sure that the graduates are both knowledgeable and competent to practice. Graduates must be able to master the knowledge of their fields and they must be able to translate that knowledge into procedures which benefit human beings. They must constantly add to their knowledge.

Graduates of professional schools are instruments for the achievement of socially significant ends. They are not and cannot be ends in themselves alone. Because of these goals, professional education encompasses and exceeds the goals of general undergraduate and graduate education. There is small wonder that educators and professional schools must keep struggling to find more effective ways of executing their strenuous tasks.

It is my conviction that educators in the various professional fields can learn much from one another. Professional schools, although the basis of the medieval university, have only recently blossomed within the modern university. At the turn of the century, for example, most medical schools in the United States had little connection with universities; now we can hardly conceive of their being anywhere else, although a very small number of separated medical schools remain. But because professional schools have a history of isolation from each other rather than a history of cooperative effort within the friendly confines of a campus, they have not yet discovered that they can learn from each other. Instead, each tries to solve its problems with little effort to look across the quadrangle to see what its neighboring professional schools in other fields are doing to meet educational problems that are common to them all.

Of course, no field should slavishly follow the practices of any other field, even if the second has been unusually successful in obtaining prestige or funds. But the concepts, procedures, and practices of each field may have significant suggestions to offer other fields, as all struggle to improve professional education. Each field can judge the usefulness of other practices for its own work, if it knows what those other practices are. If it knows only its own practices, however, it may waste a great deal of effort in trying to solve its problems by painfully duplicating what is already at hand but unknown.

Each professional field must establish objectives to guide its choices of educational content and procedure. It is little known that the objectives which educators in the various professions set for themselves are much broader than objectives set for other sorts of higher education. As best as I can determine, the objectives of professional education include professional competence, certainly; but, in addition, they include social understanding, a professional personality which responds without conflict to the demands of professional ethics, zest for continued study, and ability to execute or interpret research. If these five objectives are to be attained, each professional field needs to analyze its programs to find out whether what it does fits its objectives. Furthermore, it needs to decide whether the relative emphasis it places on its different objectives is satisfactory. For example, are its graduates exhibiting zest for continued study once the campus is far behind and the press of daily work is upon them? If its graduates make little effort to match the progress of knowledge in their field, are schools in other fields more successful? If some are, what are the causes of their relative success? Are they following educational procedures which are worth adapting? And so on.

In other words, the schools must evaluate success in light of objectives they have adopted. They need also to evaluate the appropriateness of their objectives, and the meaning they place on them.

Much of the conflict over professional schools centers around the curricula, mainly over whether the schools focus so sharply on "vocational ends" that their graduates emerge, the accusation goes, as superb technicians but as poor scientists and poor citizens. The curricula of teacher education receive the brunt of this attack, but others are often included. Part of the attack is based on lack of understanding. No professional school I know of is interested in producing graduates who are trained so narrowly that they will be lost if a job requirement changes. Professional schools are just as aware as liberal arts colleges that society is dynamic and people mobile, and that the practice of a professional man may stretch over a period of forty-odd years during which much science and society may change.

Each field seems to have settled upon the fact that the education of a professional man must include some mastery of the basic arts and sciences, some of the "professional sciences," and some of the skills of application. But there are very wide differences on how much of each is important, who should provide what, and what degree of mastery is necessary. Unless professional educators are willing to make choices, the curricula will extend for longer and longer periods as knowledge expands. Is it necessary, for example, for dental students to dissect the entire human body in order to learn how to care for its teeth? Or is this a traditional requirement which consumes curricular time better used

for other subjects, such as the principles of community action by which dentists might be able to be more successful in encouraging cities to fluoridate their water? Is it necessary in medicine for a student to spend two full clinical years in medical school, to be followed by a year of internship, and often three years of residency in order to learn the skills of application in his field? No other field requires such a long period. Law requires none. It would be useful to know why these large differences exist and whether they are useful or ornamental.

Because professional education has the task of making certain that its graduates are competent to practice their professions, it places great emphasis on the skills of application. It does this by placing the student in a program being conducted by the profession, where he can work under supervision with increasing freedom and responsibility. In his early exposure to the functions of the profession, he does little on his own. Later, he may operate with substantially the same responsibility and freedom that he will enjoy when he enters the profession after his graduation.

There are wide variations among the professions in their use of supervised work as a means of teaching the skills of application. Law has very little, if any, activity of this sort, depending almost wholly on later practice to bring command of these skills. Engineering, except within so-called cooperative programs where study on campus and work in industry alternate at set periods, does almost nothing. On the other hand, two years of medicine and dentistry are devoted to these activities, and medicine adds another year through the internship in hospitals, often directed by the medical school itself. Social work parallels classwork with field work, starting the latter within two weeks after entrance into the graduate school. But medicine and dentistry postpone the time for clinical training two full years after admission. Which is preferable? Or, even, why are there these large differences?

To make the differences even clearer, you need only to remember that the medical school typically operates a substantial hospital in order to make certain that its students can see medicine practiced with as much use of modern science as the university can afford. It is difficult to estimate the costs of this system, but the Association of American Medical Colleges in a recent study classified medical schools into several groups, according to operating costs of the school—the lowest group spent on the average a million and a half a year each. An appreciable portion of this cost lies in the operation of the teaching hospital.

Schools of teacher education some years ago felt compelled to operate demonstration schools to provide students with opportunities to emulate excellent teaching. The dental school has its clinic, and the university school of nursing usually does its clinical teaching in the university hospital. But law, except in such minor manifestations as legal aid clinics, feels no necessity to operate a law firm in which students can practice becoming lawyers; social work schools do not operate social work agencies to make certain that they function properly, although they may assign faculty members to the agencies to make sure that the teaching is done effectively; business administration has not yet found it desirable to establish and operate an industry. What is the difference? Has law concerned itself too little with application? Has medicine concerned itself too much? Are there useful ways neither or none has yet discovered?

With only a few exceptions, every profession has established a code of pro-

fessional conduct which guides the practice of that profession. The code is a guide to appropriate professional conduct, and may be used as statutes whose flagrant violation will be met by expulsion from the professional group. In fact, those who attempt to define professions, from Abraham Flexner on, have emphasized that altruism is an essential attribute of a profession's practice. Without desire to benefit society a vocational group cannot be or continue to be a profession.

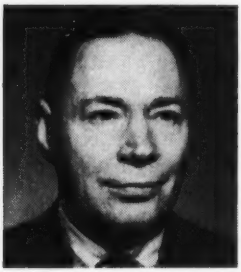
Since this is true almost by definition, it follows that professional schools, almost universally, have set themselves the task of helping their students to become imbued with the spirit of professional ethics, so that they can continue the practice of the profession in ways designed to benefit those whom it serves. But no profession, no group of professional schools, is willing to state that it is at all satisfied with the ways it has found to achieve this objective. Some content themselves with a lecture or two, forgetting that they would reject such a casual method for teaching any other part of professional competence. Others may struggle harder, but many are content merely to insist that example is stronger than precept and that an ethical faculty for the students to emulate is about all that one can hope for. The policy, it would seem, is one of desperation, as if the professional schools were almost saying, "We don't know what to do, so let's do nothing."

Surely professional schools must find ways of teaching ethics that are more effective than the ones they are now using. None is satisfied with its present efforts.

In summary, I believe that education in each profession has much to teach those of other professions, just as each has much to learn from the others.

NOTE: Panelists for this group were RENA E. BOYLE, Director, Department of Baccalaureate and Higher Degree Programs, National League for Nursing; ROBERT F. DRINAN, S.J., Dean, Boston College Law School; L. E. GRINTER, Dean, Graduate School, University of Florida; E. V. HOLLIS, Director, College and University Administration Branch, Office of Education, U.S. Department of Health, Education, and Welfare; WILLIAM R. MANN, Professor of Dentistry, The University of Michigan; PAUL A. POE, Educational Advisor, Air Force Educational Requirements Board, Air University, Maxwell Air Force Base; WALTER A. TAYLOR, Director, School of Architecture, Ohio University; A. C. VAN DUSEN, Vice Chancellor for the Professions, University of Pittsburgh; and RICHARD H. YOUNG, M.D., Dean, Northwestern University Medical School. Moderator of this group was THOMAS H. CARROLL, President, George Washington University; the recorder was E. R. JOBE, Executive Secretary, Mississippi Institutions of Higher Learning.

The Role of Higher Education in the Development of Effective Certification Standards for Secondary School Teachers



FRANCIS S. CHASE

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SOMETIMES FACULTY MEMBERS of higher institutions seem to think of existing certification standards as a mold into which they are forced to pour all their efforts in teacher education. Often, too, they seem to imply that but for the arbitrary restrictions of this mold they would develop teacher education programs to produce teachers of increased strength and grace.

Another point of view was expressed to me recently by a thoughtful former director of certification in a state department of education. He said: "Many colleges and universities who profess to prepare teachers are not really concerned about the quality of the people they prepare for teaching. Their concern is to merely meet minimums and the lower these are the better. They want prescriptive minimum requirements expressed in terms of specific courses. All they need do is offer these courses, and having done this they are willing and glad to shift to the legal certifying agency the responsibility for determining whether or not a particular person is qualified to teach."

Several years ago, I was serving as consultant for the development of teacher education programs in a state university. As the outlines of a revised program took shape, a question arose as to whether state certification requirements would interfere with moving in the desired direction. To this question a professor of secondary education retorted: "Since we wrote and recommended to the legislature the requirements now in force, there is no reason to think that we are powerless to get the requirements changed."

Three views of the relationships of higher institutions to teacher certification are suggested by the foregoing: 1) that the institutions are encased in a strait jacket by powers they cannot resist; 2) that institutions seek the chains which bind them; and 3) that higher institutions may in effect write their own tickets.

In an excellent interpretive report of the San Diego Teacher Education and

Professional Standards Conference, Heffernan and Schueler note that "a striking development in the Conference was the preoccupation with the role of the teacher education institution in determining standards of certification." They elaborate the point thus:

> Much attention was given to the approved-program approach, in which an institution receives prior approval of its program from the state department of education, and thereby assumes primary responsibility in determining individual qualifications for licensure. This approach not only greatly strengthens the influence and responsibility of the college or university as the agency closest to the candidate and, therefore, theoretically best able to judge his qualifications, but it also makes possible greater flexibility in achieving and determining competence . . . However, with colleges and universities given greater responsibility in the process of certification, the consequent need to secure some agreed-upon level of program quality becomes paramount. Accordingly, much attention was given to the growing role of accrediting agencies in establishing and enforcing proper standards of quality of programs of teacher preparation.

The statements quoted above summarize admirably the promise and the problem of delegating to higher institutions the prerogative of specifying the routes through which persons may enter into careers in teaching. Before we commit ourselves to the "approved" program approach we would do well, therefore, to weigh the potential gains for creative and flexible program making against three conceivable dangers:

1. That higher institutions might use their new powers to establish and perpetuate programs which have more relevance to the predilections of their own faculties than to the production of a competent teacher.

2. That faculties in the arts and sciences either will not be represented adequately in development of programs for secondary teachers or will not be able to collaborate with education faculties in developing viable programs.

3. That the heavy hand of accrediting agencies on institutions will result in controls even more restrictive than those represented by the present prescription by course title.

In short, the crucial question is: Can we trust the higher institutions with greater control over certification without imposing restrictions which threaten a loss of freedom more precious than the power gained?

The role of higher institutions may be interpreted in the sense of *contributions to* rather than *control over* "the development of effective certification standards." We can get on with the task of developing effective standards only if we are clear as to what we mean by "effectiveness" and can devise means of measuring it. Higher institutions, therefore, might be expected to contribute to an operational definition of effectiveness through a systematic process of definition, conjectures about relationships, and verification or refinement of hypotheses. As yet we have scarcely begun to apply theory and research to the problem of establishing valid and usable criteria for measuring the effects of certification standards; and we have done even less to project standards that bear even a hypothetical relationship to such presumably desirable effects as increasing the number and proportion of teachers who are both highly intelligent and highly motivated to apply intelligence to the practice of teaching.

Higher institutions might also be expected to contribute to the development of measures of competence in teaching. To date they have done little more than

complain of the inadequacies of existing examinations and ratings. If someone could devise valid and feasible means of determining how the learning of students would be affected by persons with particular combinations of personality traits, values, and knowledge, we could leave institutions free to offer, and individuals free to seek, their own preferred routes to the attainment of the required competency. We then could guard the entrance to teaching not by requiring a certain kind of baggage in the form of courses taken, or a certain mode of travel as in the approved course approach, but by assessing the capabilities of the person.

The most important contribution higher institutions can make to the development of effective certification standards, or to effective programs of teacher preparation, is through the advancement of understanding of the process of education. Until we know more about how human beings learn and what motivates them to continue learning, we are in a poor position to measure the effectiveness of teaching. And, so long as we are unclear about what constitutes effective teaching, we are ill-equipped to develop either preparation programs or certification standards which contribute to good teaching. The assumptions on which we are operating may indeed be more or less correct, but they would be more useful if they could be validated and made more precise. Another important contribution which higher institutions might make is the identification of changes in values and in overt behavior which are associated with different elements in programs of teacher education.

Probably the most essential contribution that higher institutions can make to the improvement of certification standards is through research that will illuminate the teaching-learning process. It is possible, however, that there is one contribution of even more pressing importance at this moment in history when new knowledge and new technology must be applied swiftly to close the widening gap between the ever-growing demands on education and the provisions for it. I refer to the need for a reconceptualization of the role of the teacher that will take into account the varied resources now potentially available to learners and the crucial judgments involved in enabling each learner to draw upon particular kinds of resources at the moment and in the manner most fruitful for him.

Along with theory and research, higher institutions can contribute to the development of more effective standards for secondary teachers by imaginative planning of teacher preparation programs. They can see to it that teacher education programs are the result of thoughtful collaboration among scholars in the academic disciplines and students of education; that they are directed toward understanding of the structure of knowledge and the modes of inquiry within the subject field as well as toward understanding of educative processes and institutions; and that they are carefully evaluated for the changes actually produced in those preparing to teach.

WILLIAM P. VIALL

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National Association of State Directors of Teacher Education and Certification and the American Association for the Advancement of Science

A VERY NARROW DEFINITION of teacher certification is that it is a process by which the state rules upon the fitness of a candidate to teach, according to measurements which, if not set down in statute, are codified to have the impact of law. The certification codes usually require patterns of preparation with minimal terminal points in accredited institutions.

The preparation program is, of course, the heart of the matter. State and national accreditation of teacher preparation institutions is a recognition of this fact. State teacher education councils throughout the country involve institutional representatives. State education departments rely heavily upon institutions for leadership in programming and research in the area of teacher education.

Many teacher education institutions have for generations been closely concerned with the schools around them. They have sought to help improve the schools in their areas by services related to student teaching, in-service programs, and area studies. They have taken leadership in everything from county fairs to science fairs. They have served as centers for clinics, bookmobiles, and audio-visual aids. They have counseled beginning and experienced teachers and provided help for supervisors, administrators, and school boards. Institutions have joined with each other to improve their own programs and their services to their regions and their states.

This all relates to certification, for certification is, in its best sense, a developmental function of the state in which institutions share. It is, perforce, much more than a code. Certification and teacher education staffs of state departments of education have worked hard to assist institutions to raise the level of teacher education programs. No one knows better than they that certification codes cannot be improved without the assistance of preparing institutions.

The role of institutions include responsibilities in institutional self-improvement, improvement of area school programs, and improvement of state and national programs. These responsibilities can be fulfilled by persistent efforts in several areas. There are certain key words which can offer clues to institutional fulfillment of the role of higher education in certification.

The first is *awareness,* for the institution must be aware of the upward trend in our knowledge of human behavior. It must be aware of the many signs of change in curricular offerings in a variety of projects currently in progress—proj-

ects that have implications for the substance of what is to be taught and also in the performance of teaching.

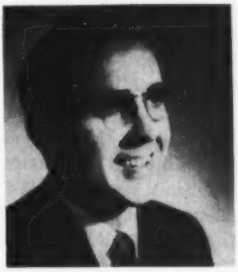
Another key word is *participation*, for the institution must participate in area, state, and national movements to improve teaching. Faculty members must participate in research and institutional developments in teacher education. Institutional representatives must participate in local, state, national, and international research, and in organizational and governmental projects intended to improve teaching.

The third and last key word is *administration*. It is in the administration of the institution's teacher certification-teacher education function that we may find the incentive or preventive factors that determine the quality of the institution's effort. Incentive factors would include adequate travel funds for faculty and funds to invite deep research into educational problems. Also under administration would be organizational factors to stimulate on campus the interplay of ideas, the growth of knowledge, and the development of concepts in teacher education.

I would add one thing more: Whatever improves an institution serves to improve teacher certification. For in my concept of certification, there is no room for static reliance on a minimal code. Raising standards for teaching service in the schools is a continuous process. It cannot be achieved in the state capitol. It can be achieved in state higher education institutions.

NOTE: Chairman of this group was A. L. KNOBLAUCH, President, Western Illinois University; the recorder was CARL J. FREUDENREICH, Chief, Bureau of Teacher Education and Certification, New York State Department of Education.

The Role of Philosophy in General Education



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WITH THE RISK OF PRESENTING a superficial answer to the question implied in the title of this paper, the following statement appears to me to be a fair description of the activity known as philosophy: *Philosophy is the process of uncovering, critically examining, and answering the personal and universal questions of human existence to the end that the person or persons may discover a maximum of meaning, truth, and motivation for life.*

Russell Cooper's brief statement (in his chapter, "Curricular Programs in General Education," in *General Education, An Account and Appraisal*) will serve as a loose definition for general education for this paper:

> Such [general education] programs all seek to identify among the vast ranges of human knowledge those fundamentals essential to the well being of cultivated men. These essential ideas and intellectual skills must then be brought together in systematic and intelligible fashion in order that the student will be motivated to comprehend them and apply them in his personal living.

Cooper goes on to say that general education is general in that it is designed for *all* people in *all* the academic disciplines and is concerned with the student's *total* development, his values and aesthetic sensitivity as well as his purely intellectual values. Finally, general education courses are not thought of as preparatory to more advanced studies in any given specialty nor as terminal. Rather such courses are "independent and significant in themselves" although it is hoped that they will "excite student interest and promote habits of independent reading . . . throughout life."

If, then, the characteristics suggested above for philosophy and general education can be accepted for this paper, the task here is to explore the role of philosophy (as defined) in general education (as defined).

The place of the philosophic enterprise in the education of all students, taught not as a prerequisite to later and more technical courses, is in part implicit in the definition set forth in this paper. If philosophy is the process of uncovering, critically examining, and answering the personal and universal questions of

human existence, then a first task of philosophy is to make a frontal attack on such questions.

It is not difficult to get students to become aware of the questions which bother them most. During the opening sessions of a general education course entitled "Basic Beliefs in Human Experience" at Stephens College, we ask the students to pose questions which haunt them in their most serious moments. A studied attempt is made not to suggest what kind of questions are philosophically respectable. In an open discussion these questions are cogently expressed. A student, almost ashamed to raise an issue about God's existence, for example, lest he be frowned upon, takes courage from his classmates. All sorts of issues appear when the class atmosphere suggests that the stuff of human experience is really appropriate for the course.

The faculty who are teaching this course have discovered that high on the list of urgent concerns are questions about the self. What is the self? Why do I show anger and fear? What is love and what is its place in human relations? Is one really free? What connection is there between the body and mind? What about Darwin and the Bible? As personal intellectual journals begin appearing on the instructor's desk, it becomes clear that there is a near frantic desire for help in clarifying the questions and at least to find some alternative answers to them. Of course, many freshmen are impatient with the reflective process and want immediate and precise answers to their questions. Some cannot tolerate the slowness of working through questions and possible solutions. Yet for the most part, the tension set up by conscious awareness of the questions and the urgency of finding answers keeps alive the hope that the philosophy course will be relevant to their intellectual growth.

Our experience has given us reason to believe that when philosophy is conceived as the process herein defined, a framework is provided for maximum achievement in a heterogeneous class. Average students are not lost, since the discussions, lectures, and assignments are related to themselves as persons. The more able students are encouraged to read more widely. Occasionally, with only casual suggestions, they begin to dig into Beckett's *Waiting for Godot*, or Augustine's *Confessions*, or Milton's *Paradise Lost*, or whatever else is in vogue on the campus that relates to the course. Others begin to relate their readings about human nature to studies in classical mythology, psychology, or biology. Occasionally a student's eyes light up as he confesses a remarkable revelation, e.g., that the assumption about human nature in Huxley's *Brave New World* is such and such. These illustrations simply suggest that it is possible in a philosophy course to work with the students in facing problems head on at the beginning of the course. Philosophy then becomes what it has always been for the great philosophers—an exciting, penetrating, and absorbing inquiry into the issues of life that matter most. This is one role of philosophy in general education.

A second obvious role of philosophy is that of making a critical and appreciative study of values. Surely no philosopher would disagree that axiology is one branch of philosophy of crucial importance. It could also be said with conviction that a study of values and teaching for values is not the exclusive possession of philosophers. Yet it seems fair to say that a study of the arts,

or sciences, or the social sciences will not usually provide the occasion for students to be appreciative and critical of the *whole range* of values in terms of which decisions are made and about which life is oriented. Thus the opportunity to work directly with value decisions and a development of a framework in which such judgments are made rests within the jurisdiction of a general education course in philosophy.

Three general and interrelated approaches offer great opportunity in a study of values. First, few students are aware of the continuous process of value judgments which they make. Whereas students in some courses may be considered dilettantes if they spend time in reflecting on their own intellectual concerns rather than external facts or ideas, the study of values can best start with introspection of human experience and personal choices.

Secondly, any academically profound course in philosophy will move in the direction of helping the student uncover some major principles which have been declared to be criteria of value judgments. Hedonism, Kantian Formalism, Mill's Utilitarianism, Dewey's Pragmatism, and Ayer's Emotive Hypothesis become live opinions because their relevance does not have to be pointed out by an instructor. Subsidiary issues will naturally demand attention in class and will need to be anticipated in reading assignments. These include problems of relativity and absolutism, the sacred and the secular, objectivity and involvement, and altruism and egotism.

Thirdly, through a study of values, students should become aware of the unexamined value assumptions in their total academic world. The sociologist, the art critic, the psychologist, the dean of students, and the theologian are all involved in value assumptions which are clear to themselves but often unexpressed to students. A philosophy course in which an effort is made to clarify and critically evaluate such principles will occasionally be a threat to colleagues. At the same time, it will offer the kinds of insights leading to greater motivation in learning in general and will foster a sense of integrity to the total educational experience. Then this process of value sensitivity, inquiry into a wide range of value theories, and a probing into value assumptions in the academic world should direct the student back to the necessity of clarifying and modifying his heretofore unexamined premises about values—intellectual, aesthetic, religious, and moral.

A third major role of philosophy is epistemological in nature. It is trite to say that a college is concerned with knowledge and truth—the intellectual pursuits. Yet in this endeavor, the methods employed are not as homogeneous as are supposed by students or by faculty who are specialists in a given area. The laboratory scientist, the poet, the musician, the artist, the chaplain, to mention a few, pursue their objectives, often oblivious to what claims are being made around them about ways of knowing. And in the ten-minute interval between classes, a student has to shift mental gears between the science building and the Introduction to Art seminar room. Only the most alert student is aware that there may be different ways of knowing and different notions of truth being promulgated.

Whatever the particular knowledge theory of the philosophy instructor, a reflective attempt to understand the various "truth claims" and methods of

gaining and validating knowledge is a task which must not be left undone. It might reasonably be supposed that the teacher with a philosophic perspective is best prepared to help the student, through directed reading, lectures, and class discussion, to see contrasts and interrelationships among the various ways of knowing.

Fourth and finally, if students are to uncover, evaluate, and at least tentatively resolve their basic human questions, this will obviously be accomplished through their total academic growth in which integration of learning happens. Although there is unique subject matter in the study of philosophy the process of philosophizing utilizes resources from every area of human thought and activity. If the topic under consideration concerns the "nature of men," data from biology, psychology, anthropology, sociology, to name only a few disciplines, are essential in moving toward understanding human nature. Novels, plays, myths, art, religion, and poetry are filled with ideas, symbols, plots, and insights about human nature. The teacher of philosophy may not wish to use materials from the other academic areas as the exclusive content for his course. He should, at least, give forthright guidance to the students in the process of finding threads of relationship among all the studies. Not only will this kind of effort move toward the objective of philosophy—gaining of comprehensive meanings (as well as seeing things steadily and seeing them whole)—but it will result in heightening the motivation for every other study as the student begins to see a relevance of one course to another and all courses in relation to basic concerns of human life.

NOTE: Chairman of this group was SYDNEY W. ANGLEMAN, Director of General Education and Professor of English, The University of Utah; the recorder was ROBERT F. DAVIDSON, Chairman, Humanities, University College, University of Florida.

Updating General Education Courses in the Natural Sciences

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SHOULD GENERAL EDUCATION courses in the natural sciences be primarily concerned with informing the students of the current facts, laws, and theories of the various disciplines, or should they be primarily concerned with the history, philosophy, methodology, and social relevance of science as a whole, using selected facts, laws, and theories from the various disciplines as examples?

The answer that you give to this question will depend on your concept of the function of general education. If you see its function to be one of introducing students to various areas of knowledge, in a sort of cafeteria style, so that they can survey and select, the primary content of natural science courses should be the subject matter of science itself. This subject matter may be presented in blocks and gaps or it may be integrated in one way or another but the primary objective would be to acquaint the student with the same information that he would get in a traditional introductory science course.

On the other hand, if you expect general education to do more than introduce students to new areas, and to produce insights and understandings not available otherwise, you must teach something more than the facts and theories of the sciences.

I think general education courses in the natural sciences should lead to an understanding of science. Students should be able to see science as a whole and to relate it to other kinds of human intellectual activity. This means that general education courses should be about science and not courses in science. When we say that we understand something, we mean that we have some system of ideas into which we can place the thing to be understood. It means that we recognize a thing or an event as an instance or particularization of some generalization. Thus, I understand and can explain the particular event of a falling stone by the general law of gravitation. I can explain the soreness of my throat by recourse to the germ theory of disease.

In order to understand and explain science one needs to see it as an instance of a more general system. Where will we find the more general system into

which science fits? By examining the history, philosophy, and methodology of science.

One of the methods of science is classification which has produced taxonomies of animals, plants, minerals, rocks, etc. But this is only an extension of a general human intellectual function—we classify everything. Without classification we wouldn't recognize the objects, events, and people that we live with every day.

Scientific laws are generalizations, but so is the statement, "I need at least seven hours of sleep if I am to be reasonably alert the next day." We guide our lives by generalizations—some we make ourselves, some are handed on to us by custom, and some we fix as human laws. Scientific laws or generalizations are special forms produced by the more general function.

Scientific theories are conceptual systems, but so are philosophies, theologies, and economic systems. Thus, scientific theories have something in common with all conceptual systems, but also they are different. Understanding science means understanding the nature of conceptual systems in general, plus understanding the unique differences represented by scientific systems. Thus, to understand science is to see it against the background of its history, to recognize it as a unique and special variation of a more general type of human intellectual behavior.

From this it follows that the primary content of a general education course in natural science would be something other than the subject matter of the various sciences. This does not mean that such material would be neglected. You can't teach about science and achieve an understanding unless the students know some science. Certain selected facts, laws, and theories would be essential elements of any general education course, but their function in such a course would be as concrete examples of more general understandings. One could not understand how scientific knowledge grows unless one understood at least one scientific generalization or theory and its relation to the relevant empirical data.

Should general education courses in the natural sciences be required of all students or only of nonscience majors?

Through the years many of my scientific colleagues have insisted that science majors do not need general education courses in science and should not be required to take them. They claim that such courses would contribute nothing that science majors would not eventually acquire as a result of their special concentration.

There are two answers to this objection. The most convincing one is that students change their majors so frequently that if we permitted freshmen students who claimed to be science majors to waive the general education course, many of them would experience very little science. The second answer is that I simply do not believe that the average science major, concerned as he is with the minutiae and internal workings of his discipline, ever gets much chance to stand back and view it as a whole against the background of the total culture. I maintain that science majors need this experience as much as nonscience majors do.

What is the best method of training teachers for general education courses in the natural sciences?

First, it is essential that such teachers have traditional training in two or more disciplines. I have found the biologists to be the best trained for our program because their academic history includes physics, chemistry, and mathematics, as well as biology. In addition, some courses in history of science and philosophy of science are recommended.

Should general education courses in the natural sciences include laboratory courses? If so, what function should the laboratory perform?

The answer is "Yes, they should," and the function the laboratory would perform is threefold. First, only by direct contact with animals, plants, rocks, etc., with chemical and physical phenomena can the student understand the kinds of experiences that the scientist attempts to explain. Sometimes this contact opens up an entirely new and exciting world for the student and this itself is important. Second, the basic process of induction becomes more meaningful if the student can have the experience of collecting data firsthand, and of attempting to find some pattern in that data. Third, the process of deduction from theory, of prediction, and of experimental test take on a new significance if they are actually performed.

NOTE: Chairman of this group was ROBERT S. COHEN, Professor of Physics, and Chairman, Department of Physics, Boston University; the recorder was CLEMENT L. HENSHAW, Chairman, Department of Physics and Astronomy, Colgate University.

Updating General Education Courses in the Fine Arts and Humanities

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AT FIRST GLANCE, the possibilities for updating or improving the general education courses in the fine arts and humanities seem rather limited. The national and professional climate in which general education has to struggle and compete is not too encouraging. Not only is the whole of education besieged by pressing problems, but within each family of colleges there are fierce struggles for status and gain, many times at the expense of other members of that family. There can be no doubt that the decade ahead will make or break certain aspects of university and college structure, be it privately or publicly endowed.

Just reading this partial list of anticipated changes in higher education for the next decade, as reported by nineteen states, is cause for concern: Enrollments will double; faculty shortages will be acute (to say nothing of the quality of teaching); higher tuition will be charged; higher admission standards will be required; more colleges will operate on a year-round basis. If the crystal ball gazing proves correct, the effects on general education will be staggering. As these effects are distributed further into the structure of general education, those areas such as the fine arts and humanities will suffer the most.

General education is not girding itself with its most appropriate and powerful weapons to meet the challenges as they arise. It will be easily overwhelmed if it tries to keep its head above water by hanging on to the coat tails of the "big-brother" programs in the other colleges. Sadly enough, there is a current trend in which general education courses are becoming merely shortened and shallow imitations of their counterparts in a liberal arts program.

Somehow the image of general education as it was pioneered and developed has dimmed. It had an individuality, a uniqueness all its own. There was a spirit of adventure in the program, and of experimentation. Experimentation, indeed, was a distinguishing character of its enterprise. Certain rigid qualities

not unlike rigor mortis have set in; the posture is more apt to be prone than upright. Hopefully, it is not too late to revive some of this former spirit, perhaps not by the same methods, but surely there are new ideas and new inspiration which can bolster up our sagging program. These new ideas must be weapons of offense. Our problem is not merely to justify our existence with enrollment figures—our need is to make ourselves indispensable in the scholastic lives of our clientele.

There are almost as many philosophies of general education as there are institutions that profess to teach it. There is need for a more precise working definition of general education which would serve to unify our forces and make all of our disparate efforts a more potent, effective, single one. In many respects, my ideas on this are guided by concepts set forth by H. T. Morse, in an article published some time ago:

> General education . . . is more concerned with the learner than with the content, which may be organized or reshuffled with less regard to traditional fields. Its goals are individual development in its various aspects, and it places emphasis upon behavior and social usefulness as well as upon intellectual development as an outcome of learning. It is a manifestation of the democratic spirit in higher education, for it admits a wider scope of abilities and a far broader clientele. In its fullest development it is decidedly not merely "old wine in new bottles."

The individual teacher engaged in general education finds himself in a rather isolated and lonely position. He is neither fish nor fowl and is vulnerable to criticism from the public, from the good fathers who run the institution, and to a certain degree from his colleagues in other colleges who unfortunately are all too ready and willing to preside over his entombment. Consequently, any improvement in either his status or the quality of his courses must be primarily realized by his own efforts. To a great extent his endeavor to lift his prestige and his program will be a boot-strap operation, and in the process he may well step on many toes. More often than not the general education teacher will have to make decisions not in conformity with the practices and direction of his peers. In effect, he needs to become a rebel and through his efforts effect a kind of academic revolution. But a revolution needs a cause to embrace and an ideal to inspire. I would like to suggest a cause to embrace which I believe can be applied on the operational level of classes in the fine arts and humanities. If adopted wholeheartedly, some very radical changes in the façade of general education could occur.

During the past decade, a number of noteworthy studies and experiments have been concluded in the field of creativity. The fund of knowledge and insight from these studies is very impressive and inspiring. The inferences from these studies are sobering enough to make even the most casual teacher pause in reflection of his role and importance. Here at hand are emerging timely tools for the teacher to fashion his program anew.

How can this knowledge and information about creativity be specifically applied to the classroom? Here are some suggested proposals as illustrated by examples of application and practice by members of the arts staff in the General College at the University of Minnesota. The total design and structure of individual activities in both the laboratory and lecture-discussion sessions need

re-examination. Each activity comprising the total of any given class day is subject to very subtle shades of creative behavior. These should be discriminatingly selected or rejected according to their compatibility to the process of creativity. Some activities by their very nature are just chores that the student is obliged to perform. Others by contrast are inviting and excite the student to satisfying endeavor. An activity's primary function should be to serve as a catalyst to trigger behavior in the student which can successfully be channeled into creative ends.

Our staff subjected our activities to the following three criteria: 1) the materials of the particular activity should be able to be manipulated with minimal skill or dexterity; 2) the completion of the activity should be realized in a relatively short period of time; and 3) the activity should contain in its make-up the element of surprise and discovery and present alternate choices in the process of development.

Obviously this set of criteria cannot apply fully to laboratory and lecture classes alike. The nature and content of some courses preclude such kinds of overt participation. Some encourage rather the passive or vicarious experience. We are managing to make our lecture courses more like our laboratory ones and enhancing the labs by the addition of more discussion sessions. Moreover, we are slowly formulating a set of activities which are suitable for either setup.

The term "activity" is, perhaps, confusing and can be clarified by reference to an activity we incorporated in the arts lab program recently. We substituted the activity of sand casting for an activity like enameling of jewelry. It can be mastered easily, it can be completed in one class session, it presents an infinite number of possibilities for completion. It is a highly desirable medium because the outcomes are for the most part unpredictable, and the operation does not lend itself to trite preconceived ideas. Each idea emerges new and fresh as a result of each experience faced in the activity. Sand casting is a method of forming third dimensional designs in a semidamp sand bed either by hand or by tools, then pouring plaster over the surface. When the plaster has set, it is plucked from the sand and the affected surface can be treated in a variety of ways. One of the most significant aspects about an activity such as this is that it affords the teacher the opportunity to observe and respond to the spontaneous and immediate creative levels that unfold before his very eyes. Both the teacher and student participate as partners in the educational process. In an activity which is too intricate, too time consuming, and too demanding of skills and technique the spontaneous and creative enthusiasm is oftentimes dissipated; the activity becomes routine and a chore. In some cases it almost becomes a penance.

The second example of the term "activity" is selected from a large general arts course of the lecture-discussion type. This activity makes use of reflective surfaces to produce moving forms and shapes in color on a white surface. By simple hand manipulation of a photographer's ferro-type plate, light from a projector is reflected onto a screen in moving color designs. In this particular course students were studying the similarities of contemporary forms of art. This reflective activity nicely combined visual abstract forms with music, with poetry, and with dance. Individually and in groups, the students created a wide variety of visual effects which were later recorded by movies, camera, and

tape recorder. This activity had a lot of side effects; other classes became involved and contributed to a broader experience with their own subject matter.

A totally new course addition to our curriculum, titled "Creative Personalities of Our Time," was woven around several contemporary figures in different fields of art. This was a class of medium size, but neither distinctly lab nor lecture. Much of traditional procedure and routine was purposely set aside. In order for the class members to find the closest identification with creativity and the personalities to be studied, it had to start from the beginning to direct its own destiny. The class chose its own group of celebrities to study and decided to participate in the particular medium with which each person was identified. Consequently, as in the study of Charles Ives, the composer, students undertook to make simple sound instruments not based on or imitating conventional instruments. These "products" were then played individually and in combination. Problems of orchestration, notation, conducting, etc., became sympathetically understood.

By no stretch of the imagination do I infer that our activities, as such, are original to the profession of teaching art. We did, however, subject all of our activities to new scrutiny and retained only those that we thought would best provide the environment for creative expression and growth.

Some problems have arisen as a result of our new directions. Grading, of course, is always with us and immediately comes to mind. At best, it is merely a device which keeps the official bookkeeping of the college in order and is a practical necessity which moves people through various scholastic levels toward graduation. As an educational tool it has always been sadly ineffective but it has a persistent way of surviving and being part of the duties of the teacher in his performance and responsibility to the college. My inclination is to do away with grades entirely, no novel suggestion, but it would be a refreshing, rebellious step to put into practice. Grading is a very disquieting problem for those of us who profess to encourage creative responses as one of the main objectives of general education. We do it with a bit of tongue in cheek and a little heavy hearted.

Second, and equally important, is the problem of the growing class. I have already mentioned that the selection of special activities can still be effectively used in classes up to fifty students, but what about those numbering in the hundreds? Luckily, we in the general college arts area are not yet faced with this grotesque student-teacher ratio.

Lastly, I propose that the problem of teacher shortage is not so pressing or as important as the lack of teacher quality. Where does one find the sensitive, creative teacher so necessary to the kind of education we promote? We in the fine arts and humanities are especially dependent upon the teacher with vision and the courage to bring that vision to reality; without his service and dedication, indeed, the whole of general education is seriously threatened.

NOTE: Chairman of this group was CHARLES LE CLAIR, Dean, Tyler School of Fine Arts, Temple University; the recorder was SARAH HERNDON, Chairman of Humanities in General Education, The Florida State University.

Updating General Education Courses in the Social Sciences

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GENERAL EDUCATION COURSES are always being updated, evaluated, and berated. Consequently, these courses have been in an almost continuous state of flux. Everyone has his own definition of general education. However, Earl J. McGrath's is the best and the most useful in terms of updating courses in the social sciences. In his book, *Toward General Education,* McGrath defines general education as "that which prepares the young for the common life of their time and their kind."

Because general education courses relate directly to our culture, they change as our culture changes. These changes have been also a symptom of a curricular disease, indicating a dissatisfaction with traditional offerings. The solution has oftentimes been unsatisfactory as well.

In order to consider an updating of general education courses in the social sciences, it is necessary first to look at some of the difficulties in designing a new and bright general education course for the social sciences. For the most part, these difficulties are well known. Nevertheless, it may be appropriate to outline the more troublesome ones:

1. Through the years, the social sciences along with other disciplines have developed excessive departmentalization and compartmentalization. Whereas in recent years there has been a tendency for the natural sciences to come closer together, it would seem that the various disciplines of the social sciences have gone further apart. In part, this is due to the tremendous increase in our knowledge of our world.

2. The social scientists, instead of admitting that their discipline is an art, have spent hours of time and have wasted reams of paper trying to prove that it is a science. This preoccupation with the development of a pseudo science has encouraged individuals teaching general education courses to follow certain will-o'-the-wisps: overemphasis on method and overemphasis on definitions and semantics.

3. It is pointed out by David Riesman in his book *Constraint and Variety in American Education* that there has been a struggle between the old social science disciplines and the new. Consequently, many offerings in the social sciences are compromised between the historical approach on the one hand and the behavioral approach on the other. The result has been that students are confused rather than enlightened. A course in general education should be based on selected subject matter rather than on an effort to resolve this ideological struggle.

A second set of difficulties, in contrast to the ideological ones, are those that might be called administrative:

1. Few graduate schools make any effort to train individuals competent to teach broad, general courses in the social sciences. In contrast, graduate specialization is often more concerned with the microcosm than with the macrocosm. Therefore, the lack of trained instructors has been, is, and will be a serious difficulty in developing programs in general education in the social sciences.

2. Colleges and universities have failed to create a climate in which general education courses can be developed. In some instances, a dean or a president has been favorably disposed to such programs, but it should be clear that unless the entire administrative phalanx (including departmental chairmen) believes that such offerings are significant and basic to the education of college students, these programs will be failures.

3. Many general education courses in the social sciences are offered without firm commitment on the part of students—they sit in such courses without understanding why they are there or for what purpose the program is offered. This is an area that might be explored and may be one that offers a key to the success or failure in any updating of general education courses in the social sciences. Most general education courses are required. But how often are requirements explained to students? How often are requirements related to the background and experience of the individual student?

How then shall we design and "update" general education courses in the social sciences? At the outset we will have to make a basic choice. In the words of Alfred North Whitehead, do we want to have students do "intellectual minuets" or do we want to hold before them a "habitual vision of greatness"? The choice would appear to be obvious. However, it would seem that too many of our present courses spend more time on minuets than on vision.

The reason for this preoccupation with trivia is that a selection of broad and basic concepts for a course in social sciences is difficult. Therefore, in order to avoid criticism from colleagues in the traditional disciplines an instructor in a social sciences course will select "safe" topics for discussion. As a result, many courses in the social sciences instead of being bold and imaginative are boring and pedestrian.

As we have indicated, the mass of contemporary material is overwhelming. Thus, the designer of a general education course instead of staying *au courant* may find it easier to select the traditional rather than the new. Hence, many courses in the social sciences are merely old wine put in a new bottle.

The following are some suggestions as to how we may proceed to modernize our thinking about general education.

The first group are substantive proposals:

1. A global perspective should be substituted for our provincial and isola-

tionist outlook. In the past, great emphasis has been placed upon American institutions and American social customs—and rightly so. However, the time has come when the United States must train its students for world leadership. It is apparent to almost everyone that the problems of Africa may have as great an effect upon our lives as the problems of California.

2. Those responsible for the development of courses in general education in the social sciences should see to it that those who develop such programs know the English language. In the past, professors have used jargon and polyglot in their lectures and in their writings. It does not follow that a science can be developed by the use of words that no one understands or by the use of words that are so defined as to be meaningless. A casual glance at any social science textbook will prove this point.

3. An updating of courses in the social sciences should also place emphasis upon the immediate and the urgent. History does not repeat itself; consequently, material should be selected that pertains directly to the lives of students. In this respect, the study of the past may have to give way to a study of the present. Also, selectivity is fundamental in the construction of a course. Too often, courses in the social sciences cover too much rather than too little.

4. The content of general education courses as distinct from their specialized curricular counterparts should deal with *how to think about* man and society. To the average student-citizen, it is more important to know how to evaluate evidence than to know how to accumulate the names of the kings of England. Courses in social sciences cannot be doctrinaire.

5. The social scientist should always take as his province the search for ways and means to preserve free inquiry. In today's world, the preservation of peace must be in the hands of diplomats. While scientists are discovering the techniques to destroy us, social scientists must be discovering techniques to save us. This philosophy should be deeply rooted in any course in general education in the social sciences.

The second group of proposals are procedural:

1. Offerings in general education have been often thought of as freshman-sophomore programs. Instead, general education should be interwoven into the four years of a student's college career. Such liberal education cannot be arrived at by definition, but by the actual test of performance in the classroom. A liberal (general) course is one liberally taught. This is a proposal that might be considered for all courses.

2. Those persons who design general education courses should ask to be freed from the artificial structure of American higher education. It does not follow that the best lectures can be given in fifty minutes, that a program should be limited to a certain number of semesters, and that textbooks necessarily follow the paths of knowledge. If general education courses are experimental in their approach to subject matter, they might also be experimental in their approach to structure.

3. Because general education courses are often alien to a student's background and contrary to his vocational aspirations, an orientation program would seem appropriate. In many cases, students are placed in required general education programs without any understanding as to why they are there. And some-

times, an instructor without any previous experience or background in general education is assigned to teach such a course.

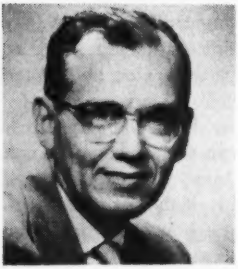
4. General education courses should have their own administrative shield. Presidents, deans, departmental chairmen should protect those who teach these courses from the sniping of colleagues. Administrators should insist, if they offer general education courses at all, that these courses are important and that they have complete administrative support. In addition, administrators should see to it that the students and instructors in general education programs are not treated as second-class citizens.

5. Instructors who teach courses in general education should be given their own rewards. They should be treated as equals along with their specialized colleagues with regard to promotion, salary, and tenure. In no instance should it be assumed that these instructors are "experts" in all fields of the social sciences. Instead, they should be individuals who can demonstrate how the whole man approaches a whole problem.

Much has been done in the field of general education and the social sciences. Much remains to be discovered. Let us always continue to "update" general education courses in the social sciences. But let us also see to it that the obsolete is not reborn.

NOTE: Chairman of this group was THOMAS F. STOVALL, Associate Professor of Education, University of South Florida; the recorder was JAMES A. BURKHART, Professor of Social Science, Stephens College.

Goals for the Future of Undergraduate Education



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THE PROBLEM IN HIGHER EDUCATION is to find a new unity in the undergraduate curriculum in which liberal and vocational interests are both recognized. It would be well, then, if we abandon the idea of general education as a movement or as a type of education completely different from or antithetical to liberal or vocational education. The concept which should replace it is that of an integrated and quality undergraduate educational program. Obviously, this cannot be identical for all, but if liberal education objectives are viewed in terms of characteristics of human behavior rather than in terms of bodies of content, it should be possible to develop principles and statements of necessary qualities of significant educational experience which could be applied in the context of varying bodies of subject matter and yet lead to much the same kind of results. This, at least, is the challenge to which we must address ourselves.

A concern for the unity in the curriculum, for the organization and integration of knowledge, is not to be accomplished by the invocation of some psychological principles independent of the logic of the various fields of subject matter. Interest in the quality of undergraduate education must force us into encouraging our best minds to engage in the development of new syntheses of subject matter, both within and across departmental lines, and to examine at the same time what we know about the problem of the novice in mastering these bodies of subject matter. Thus we can improve the quality of learning and economize on the amount of learning time required so that individuals may more quickly and more easily come abreast of the frontiers of scientific and humanistic study. The recency of development of some scientific concept does not mean that it necessarily has to be developed or taught at the graduate level. Not infrequently the application of this concept at a very elementary level would open up an entirely new insight into a number of other topics. Broad, soundly based liberal or general education courses must be based on syntheses growing out of research in the various fields as well as on principles of learning and on the relevance of particular materials to avowed educational objectives.

When emphasis is placed on learning, techniques of instruction are important only as they modify the characteristics or qualities of the learning experience. If the teacher can come to seek for his success in the learning of the students, then he must continually evaluate the impact upon them of the kind of experience provided. The range of experience possible transcends the usual labels applied in the discussion of techniques. Lectures, discussions, and the like, all essentially stem out of a preoccupation with the activity of the professor. When one talks about learning, with the focus on the student, there is but a single term, "independent study." The emphasis on independent study in the present day tends to befog the fact that the only really significant learning which takes place on the part of any individual is through independent study. The equating of independent study to unsupervised student undertaking of major tasks creates difficulties by failing to indicate the steps or degrees by which the student moves from a high level of dependence to a high level of independence.

Independent study, in a certain sense, is not a learning procedure at all; it is a goal of higher education. If the student, by the end of four years, can engage successfully in independent study, then his college education has been successful. One might assert the converse—that if a college graduate is unable to engage in any independent study, his four years have been wasted. Undergraduate education must give more attention to developing the abilities and interests which will result in students assuming responsibility for self-education.

When one focuses on learning experiences, we are forced to the realization that the whole student is involved in each learning experience. Long statements of discrete objectives are helpful in planning learning experiences, but objectives cannot be—as they often are when one concentrates on the teacher—clearly separated from one another. Similarly, the experiences appropriate to the achievement of the objectives are inseparable from the prior experience and the characteristics of the individual. No teacher demands that a blind student sit and look at slides in order to develop a sense of appreciation of art, nor that an armless person acquire laboratory skills in science. Rather, an attempt is made to provide alternative learning experiences which will cause less frustration to the student and achieve a significant level of learning with regard to the major objectives which all students are expected to achieve. Some measure of individualization in learning is essential to high achievement. With a wider range of learning experiences possible because of recent developments in self-instructional devices, the opportunity for individualization can be offered without undue strain on the teacher.

The concern manifested in general education for personal and social development has often played into a separation of personal-social from intellectual goals. It has also played into a dichotomy in administrative organization and has subjected students to experiences which are contradictory in respect to the underlying values. It is not clear that personal, social, developmental goals are prime objectives of higher education. If an individual did not choose to go to a college or university, he still might readily find a wide array of experiences which would aid his personal and social growth. The special task of the institution of higher education is to foster the intellectual growth of the individual by employing learning experiences which will also contribute to personal and

social insights. By providing a really challenging educational experience for each student, many of the problems and needs of students—to which so much time and money is now committed—would be submerged in a more all-consuming interest.

A new assessment of the functions of institutions of higher education is needed as is a new and succinct statement of objectives. These new objectives should be developed in such a way that they have broad applicability in all fields of knowledge and can be interpreted in relationship to the logical demands of the various disciplines. They should also be of such nature that they suggest long-range goals toward which the entire four-year program can be directed. Finally, they should be in accord with accepted psychological principles of learning, especially those which clarify ways in which learning is motivated. Education is essentially a psychological and a sociological process, and past attempts to state educational objectives which are based entirely on philosophical or religious points of view have provided very little guidance in the planning of educational programs. Impossible or unrealistic goals provide no direction. To go where one wishes, one must first choose to go where he can.

In view of the financial problems faced by higher education and the drain on resources caused by the overstuffed curriculum of most institutions of higher education, every effort should be made to encourage institutions to reduce undergraduate offerings in accord with some principles which would provide more meaningful sequences of courses and more significant and more widely applicable bodies of content. Such reduction in courses would result in larger numbers of students being involved in fewer courses. The increased commonality of the experience would provide a new incentive to education by the interaction of these individuals among themselves. Furthermore, the larger size of these courses would provide a new kind of flexibility in instruction which would justify the use, when appropriate, of large lecture sections, of television or audio-visual materials, programmed machine learning, and other expensive items which cannot readily be provided as long as the groups of students who would be advantaged thereby are small in number. The time gained and the economies effected could then be turned to individualization of learning in ways supplementing and enriching the common experiences. It is possible, by increasing the commonality of educational experience, to, at the same time, increase significantly the extent of the individualized learning experiences. We must break through the security approach to education. An institution of higher education should be regarded as making available to students and faculty alike certain educational opportunities and resources, along with some guidance as to how these may be most effectively used. If we could achieve this outlook, we could improve education, and we could do it more economically. We would also be able to keep some of our best students moving at a rate which would maintain their enthusiasm. Many of the side shows now run as part of most college and university programs could be eliminated if the students found the educational program itself sufficiently challenging.

It is high time that those concerned with quality of undergraduate higher education lay aside quibbles about different kinds of education, concentrate on a few significant educational objectives, and seek for ways in which large

numbers of students can be accommodated at lower per capita cost and with at least as good, and possibly better, results than has been characteristic of our past performance. The tattered banners of old will not serve to lead this movement.

NOTE: Panelists for this group were WENDELL H. BASH, Professor of Sociology, and Chairman of the Department, Colgate University; A. J. BRUMBAUGH, Director, Planning Commission, Board of Control, State of Florida; MAX CORAL, Professor of Mathematics, Monteith College, Wayne State University; SIDNEY J. FRENCH, Dean, College of Basic Studies, University of South Florida; KNOX C. HILL, Associate Professor of Humanities, The College, The University of Chicago; MORRIS T. KEETON, Professor of Philosophy and Religion, Antioch College; WALTER H. MAIS, Dean of Faculty, and Professor of Physics, Brooklyn College; T. R. MCCONNELL, Chairman, Center for the Study of Higher Education, University of California at Berkeley; JAMES G. RICE, Vice President for Academic Affairs, Stephens College; and W. HUGH STICKLER, Professor and Head, Department of Higher Education, Florida State University. Moderator of this group was RUSSELL M. COOPER, Dean, College of Liberal Arts, University of South Florida; the recorder was EDWARD A. CARLIN, Dean of University College, Michigan State University.

Establishing and Maintaining Better Curricular Articulation Between Secondary and Higher Education

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CURRICULAR ARTICULATION within a discipline—the passage in a subject from school to college—should be coordinated, continuous; the passage as smooth and efficient as we can make it. The stages of study should mesh and each student should move at his own best pace. If harmonious transition in our educative process is the prize we seek, the proper placement of the student may be the key. Sit with school and college men at coffee and at meetings and frequently you will hear them eloquently praise the idea of harmonious transition and seek, or seem to seek, the means to make it flow. We explore, agree, and fulminate, and do so little of what we know is right. Why the discrepancy? If we can agree that the purpose of our schooling is to facilitate or to speed the process by which the individual gains knowledge and responsibility, or becomes free, or becomes learned, then no matter which goal we pursue, the process is important. If we agree that for too long our process has been disorderly, disruptive, and almost, it seems, deliberately uncoordinated, and if we agree we have been excessively tolerant of waste, then why are we not eager to change? I think there are two reasons: Our disjointed system is established, and we are unduly diffident and lazy.

What is the genesis of our disjointed system and where is the conflict between our disparate parts most damaging? We borrowed, piecemeal, from different nations and philosophies, and our weakest joint is between high school and college. Eurich and Scanlon discuss our jerry-built plan, and Alan Blackmer, in the powerful and persuasive Andover Study, points to our need to bridge the biggest gap. The School and College Study of Admission with Advanced Standing also deplored the lack of articulation and emphasized the general neglect of the able student. It took the view that the best way to improve American education would be to strengthen the high schools, and that the best way to do this would be by offering them an opportunity to qualify their ablest graduates for advanced placement in college. There was also a desire to encourage "able

students in strong secondary schools to pursue a liberal arts education at a pace appropriate to their ability and their teachers' interests and skills."

The Andover Study and the Kenyon Plan are forceful denunciations of waste, duplication, and attenuation. They are also the particular progenitors of the College Entrance Examination Board's Advanced Placement Program. This program is not a panacea, but it is directed toward making us whole. It does three things: 1) It tends to eliminate waste of time and duplication of effort; 2) it stimulates students and teachers to higher achievement; and 3) it encourages schools and colleges to work together. The last is what concerns us here, for through this program curricular articulation between school and college is facilitated. Lloyd S. Michael has said: "One of the most promising developments in curriculum articulation is the Advanced Placement Program. . . . One of the most successful and worthwhile features of the Program has been the series of summer conferences in the various subject fields attended by school and college teachers to discuss courses, teaching methods, and the examination."

Charles Keller, a former director of the program, has said that at these meetings "familiarity breeds respect." It is true. Far more startling than the success of these conferences is the realization that on very few other fronts do schools and college teachers meet by subject, regularly, to discuss their subject. How did American education get so old, progress so far, without such devices?

The impact of the Advanced Placement conferences should not be overemphasized. Total attendance at nine Advanced Placement conferences last year was under 2000. While this is an impressive number when one considers the size of the program (candidates came from 890 schools in 1960, from 546 the year before), the number becomes puny when one remembers that all, not just Advanced Placement, schools and colleges should be seriously concerned with the improvement of articulation. Moreover, although our conferences have been successful, they have never been quite right. We are not reaching the number and the kind of schools and colleges we should. The impact of an Advanced Placement subject conference is limited by geography. For instance, a history teacher from the Midwest or the East finds it almost impossible to attend a history conference at Stanford. The simple observation that a teacher from X high school who can attend attends as the sole representative from that school reveals a grave limitation in the extent to which curricular articulation and the Advanced Placement message can be carried. We are now experimenting with a new conference plan which would enable teachers in every section of the country to meet annually with their school and college colleagues in every subject. It won't be easy.

The Advanced Placement Program is, after all, only one method which helps bring about curricular articulation, but it is a tremendously important one for two fundamental reasons: The schools and colleges like it, and it works.

Now that college preparation is again a major function of secondary education, the structure of the curriculum is receiving increased attention. Groups, commissions, and committees in virtually all fields are engaged in substantial experimentation. It is just such activity that makes mandatory a hard reappraisal of admissions practices. We must scrutinize credentials and devise tests that will yield enough information to enable us to certify, place, and section *all* students

in all subjects from grades eleven to fourteen and maybe beyond. The development of such a testing program is a frightening thought and a tremendous task, but I know of no more important job in American education. Admissions and placement must be refined where they have been rudimentary, protean where they have been procrustean.

In addition to curricular experimentation and the massive testing series proposed above, guidance programs are focusing on the objective of articulation. Orientation meetings, the publishing of handbooks, even intelligent recruitment stand as methods to aid in the transition from school to college. Nevertheless, despite the availability of the Advanced Placement Program and other articulative devices, despite the documented evidence and dramatic indictments against attenuation, duplication, and loss of talent, we have been worse than slow and wasteful—we have been perverse. In many of our prestige colleges, colleges that support *advanced* placement, routine placement which should have come first is a custom still honored more in the breach than in the observance. The best way to establish and maintain curricular articulation is to ensure the proper placement of every student in every subject. To do this we must make schools and colleges communicate and we must make them become better acquainted subject by subject. But this is unrealistic, for articulation, like art, does not advance under compulsion. There is a way, though. It may be anachronistic but it is sound: Let *advanced* placement lead and placement will surely follow, for if the child is not father of the man, yet he will make him run.

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THE PURPOSES OF EDUCATION have long been a subject for discussion. National problems and emergencies often provide reasons for appraisal and assessment. At least three underlying purposes would seem to persist in all situations and conditions. First, education should provide every individual with training that will enable him to deal satisfactorily with the forces in society so that he may earn a living in harmony with his capacities, hopes, and aspirations. Second, the products of our schools should be able to contribute to the advancement of knowledge. The necessity for research and discovery in the subject-

matter areas is evident. Third, there is necessity for specific consideration for the ideals and values inherent in Western democracy.

No section of our educational ladder is exempt from the responsibilities for helping to achieve the broad purposes of education. Neither can one segment ignore the responsibilities of any other. The ends will be served best when there is smooth and easy access from one educational division to the next.

In the past few decades, the elementary and secondary levels have been working to achieve what might be termed the "pupil personnel" viewpoint. The focus has been upon the needs of the individual child. His strengths and weaknesses have been appraised through testing. Teacher evaluations and reporting have added to the information. In many cases, parent-teacher conferences have been held for the purpose of forming realistic goals and helping the individual to chart a course which will help him achieve them. This development has been greater at the elementary level. High schools, too, have subscribed to this policy. Parent efforts have been solicited and close contact has been maintained.

It would seem proper to consider what the college role is in this development. From some observations, it would seem that some institutions of higher learning have taken the position that the college student can be "on his own." Some secondary administrators can testify, however, that one of the college-going youth's greatest concerns stems from his fear of failure. At this point two important questions are apropos: First, what should the high school do in order that the student not experience a drastic change in personnel policy? Second, should the college give more emphasis to and provide more time for counseling service? A consideration of this problem at all levels could contribute to better selection of students for college and eliminate waste resulting from failure at the higher levels. Further, it could result in more effective pupil personnel programs at the secondary level.

A second point for consideration involves the subject-matter areas. At the elementary and secondary levels, courses of study and curriculum bulletins present a fairly complete picture of the subject matter within the course offerings. These materials often are used in orientation programs not only for the students, but also for the parents. For the most part, secondary schools have not acquainted the professional staff to any great extent with the detailed content of the liberal arts curriculum. With the explosion of knowledge in certain areas, curricular material is expanded. Participation in the advanced placement program has had a desirable effect. Teachers have been stimulated and have become informed about college courses.

Credit arrangements are not always well defined. The institution with which I am associated is a case in point. A student with prior credits in foreign language at the high school level cannot be given credit for beginning courses in the junior college for the same foreign language. Yet, a student with credit in high school chemistry can take a beginning college chemistry course and receive credit. Grouping within the college courses takes some recognition of the prior experience. The practice of other institutions is given as the reason for this arrangement. It is perhaps correct to say, however, that this is an example of poor articulation.

One development practiced by the University of Illinois shows considerable

promise. Secondary schools in the state have been asked to send teachers in certain subject-matter areas to the University of Illinois to participate in conferences designed to inform the secondary teachers concerning course content and what level of achievement is expected. These opportunities have not resulted in a "fear of college dominance." In connection with this development, secondary English teachers have been invited to submit high school compositions for grading by university English instructors. Both the teacher and the high school student gain some ideas of the standards to be met. This has been a very helpful technique. Other colleges in other areas are probably following similar patterns.

In a final consideration, it would seem helpful if college instructors were informed of the upgrading of curriculum content at the high school level. Likewise, it would prove valuable to high school instructors and counselors to know what is taking place with respect to curriculum content and patterns at the higher education division.

It seems imperative that all educational levels consider the problem of individual competence and the national welfare. The best results will be obtained only when all levels give adequate attention to the total program. This calls for better communication and a cooperative effort in facilitating better articulation as it applies to the personnel and the subject matter involved.

NOTE: Chairman of this group was WILLARD STIBAL, Director of Teacher Selection, Kansas State Teachers College; the recorder was SISTER MARGARET GERTRUDE, President, Nazareth College.

Implications for the Undergraduate Curriculum of the Growing Importance of International Affairs and the Mounting Need To Understand World Cultures

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THE TENDENCY IN ANY DISCUSSION of curriculum is to assume that each course is a key to a separate, otherwise inaccessible room. Yet the educational product that we seek is more than the sum of courses taken. We seek the cultivated mind, the ability and the habit of independent judgment. To this end, any of the humanities and social sciences afford entry into the whole complex of human relations. There is, moreover, great overlap among courses within and between disciplines. These features of the curriculum are as helpful to the student's understanding of international relations as of any other aspect of human affairs.

It follows that our first concern is not courses as such but liberal education. No one would be likely to disagree that for undergraduate education the main implication of the increasing impact of international relations on our lives is the training of tough minds, willing and able to contemplate the human enterprise marked today by new hazards of unprecedented character. Clearly, courses dealing with international relations and foreign cultures are not in themselves peculiarly conducive to such a result. Admittedly, too, factors are involved that stand outside the liberal arts curriculum. The spirit of the times—the general tone and vigor of the nation itself—is a factor; though what is taught not only reflects the society outside the classroom but also tends to mold it.

The humanities are less directly concerned with international relations than are the social sciences, yet literature, art, philosophy, and religion shape our fundamental attitudes toward existence. Literature departments in particular are today engaged in some of the most vital intellectual work taking place on our campuses. How the humanities cope with our predicament is perhaps more important in the long run than the preoccupation of the social sciences with

the immediate problems of international relations, for the former will have the greater influence on our intellectual and moral fiber. It is a singular challenge. We have learned to cope with the certainty of individual death. Let us hope that the possibility of corporate disaster will not now sap our mental and emotional stamina.

History, poised between the humanities and the social sciences, makes a profound contribution to the understanding of human relations. Probing deep into the past, it affords perspective on the rise and fall of civilizations. There is no better way of sensitizing one's judgment on the workings of politics; history need make no concessions to its social science offspring. Even its ancient authors can speak to our own times. Thucydides achieved not only the first analytical account of international politics, but one which to this day has never been exceeded in insight nor equalled in art. His achievement was the more remarkable for the fact that he was writing about events in his own lifetime and in which he himself participated. Who today, aided by methodology and modern communication, is likely to treat the Cold War with the objectivity, the rich nuance, and the profound comprehension of human nature and political process displayed by Thucydides in his account of the epic struggle between Athens and Sparta?

Passing to the social sciences, we would have no difficulty about curriculum if they afforded indubitable solutions to the international problems that confront us. Yet their inability to do so is not merely a consequence of their immaturity. There are in politics no solutions but only the ceaseless adjustment to shifting circumstance and the agony of deciding how much to demand, or alternatively to surrender, without tearing the fabric of community or depleting one's own reserve of prestige on which his future security depends.

This insight is the essential lesson to be taught. The authors of *The Overseas Americans* stress the importance of "a sense of politics" in those sent abroad on government or business assignments. They found that, because of political naïveté, many Americans are unable to manage the pressures that form around their programs of action. It would be interesting to know how such naïveté varies as between the college and noncollege groups and, within the latter, as between the liberal arts and technically trained graduates. Insofar as a sense of politics can be academically induced, one would expect the greater sophistication in the student of liberal arts.

Above all then, the radical turn in history that we are witnessing has implications for the whole of the humanities and social sciences, all of which are concerned in one way or another with the dilemmas of decision and the moral ambiguities with which man is confronted in the ceaseless struggle with his own kind. However, various curricular problems are today seen in new perspective and others arise for the first time because of the great pressure exerted upon us by the international situation.

Obviously, for the conduct of our foreign relations, we need specialists of all kinds, in both the public and private sectors. Though the training of such specialists is primarly the task of graduate education, we face at the undergraduate level the necessity of preparing the way more thoroughly and more systematically. There is, for example, an element of emergency in the postwar area programs, particularly as regards languages, which the students in these pro-

grams now study in graduate school. In the case of Russian, the undergraduate curriculum is rapidly filling the breach. But we have in the exotic languages a more difficult problem.

Actually, a fundamental reform is badly needed with respect to the teaching of language generally. The European languages belong in the high and even the elementary school. Until freshmen come to us with effective command of at least one European language, the college curriculum will continue to be unduly burdened with elementary language instruction. To the extent that European languages can be dealt with prior to the student's entry into college, room can be created in the undergraduate curriculum for many other things, including instruction in the more exotic languages.

Reform regarding the levels in our educational system at which various languages are taught is, of course, long overdue, for the United States is the only major country in which the college-bound eighteen-year-old is typically illiterate in any but his own tongue.

Another respect in which the undergraduate curriculum could anticipate later specialization is through provision of an area minor. In no case, however, should the area constitute the major, which, it seems to me, should remain in one of the disciplinary departments.

Quite apart from preparing the ground for graduate work, both foreign language and study of foreign societies other than European are important elements in undergraduate education as such. Courses about the non-Western world, however, are largely a postwar development and still are an unsettled part of the curriculum—when indeed such work is offered at all. As a part of liberal education, study of the non-Western areas has a twofold justification. On the one hand, appreciation of our Western heritage alone is not enough. Study of the cultures and societies of the rest of the world can contribute much to our understanding of the universality of experience and knowledge. On the other hand, we are confronted with a strange political paradox. Despite their weakness and inexperience, the many new nations of Africa and Asia are, because of the peculiar configuration of postwar politics, a crucial factor in the future course of events.

How to incorporate into the curriculum courses dealing with these societies is a puzzling question. Should they be dealt with in specialized courses at the upper-class level? Should there be a broad introductory course, organized around the problem approach, for underclassmen? Should such courses at whatever level be elective or should they be worked into the pattern of required work?

A course in international relations, usually elective and designed for underclassmen, has become almost universal in the college curriculum. Though international relations in fact consist of the whole composite of human relations as they extend beyond territorial authority and cultural community, one aspect, the highly dangerous political aspect, is typically the chief concern of this course. Even so, the content varies widely. Between the wars, when international relations as such first entered the curriculum, the focus was international law and organization. But this optimism proved premature.

There are today roughly two approaches. The political process itself has come under close scrutiny, for even in the absence of governing institutions, patterns of political behavior are discernible. These have been subject to much theoriz-

ing with some results that are interesting and useful. But a course built around such material tends to be too abstract for undergraduates.

More direct and concrete is the second approach, which takes foreign policy, and primarily the problems of American policy, as its subject matter. Partly history and partly political science, such a course is not a wholly satisfactory substitute for the fuller version of its component parts. But for many students it can at least give some insight into the course of American policy in this century and it can analyze for them the extraordinary role of ideology, of the technology of weaponry, and of the non-Western peoples in the international politics of this postwar period.

NOTE: Panelists for this group were YAHYA ARMAJANI, Professor of History, Macalester College; WILLIAM J. HAGGERTY, President, State University College of Education, New Paltz, New York; ROY C. MACRIDIS, Professor of Political Science, Washington University; CHESTER L. NEUDLING, Specialist for the Humanities, Division of Higher Education, Office of Education, U. S. Department of Health, Education, and Welfare; and PAUL POTTER, Student, Oberlin College. The moderator was LANDRUM R. BOLLING, President, Earlham College; the recorder was JOSEPH STOKES, Dean, College of Letters, Delta College.

Possibilities for Improving the Master's Degree To Render It a More Effective Means of Preparing College Teachers

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THERE ARE AT LEAST FOUR generally desired qualifications for college teachers:

Mastery of knowledge. The most commonly and most emphatically recognized requirement for college teaching is a certain advanced mastery of a field or discipline. The Ph.D. degree is commonly taken to certify this level of knowledge. The college teacher is expected to have a broad and deep knowledge of his discipline, to be in some substantive sense a scholar and to have a research-level grasp of his field. Even though the *research* emphasis and the *specialization* of the doctorate are frequently deprecated, the Ph.D. alone is still taken to be *the* symbol of adequate training in the discipline.

Liberal education and intellectual maturity. In addition to high-level specialized knowledge, the college teacher is expected to have a sound general or liberal education and a corresponding intellectual maturity.

Professional knowledge, training, and experience. There is a rather widespread conviction that the college teacher needs some kind of professional preparation other than simply the acquisition of knowledge of his discipline. Generally mentioned in this connection are knowledge of the history, philosophy, and organization of American collegiate education; strictly "educational" knowledge, such as learning theory, tests and measurements, and so forth; and an apprenticeship or at least experience in actual teaching under more or less formalized direction and supervision. At the present time, the Ph.D. does not guarantee any of this sort of training nor is it commonly understood to do so. How much of this professional training is desirable or necessary, where it should be provided, how it should be provided, what certification should be awarded, and so forth, are all matters in dispute.

Character and professional integrity. Finally, colleges and universities expect their faculty members to be men and women of more than usual character and integrity, and to have altruistic ideals and strong personal motivation. Appar-

ently, no one expects a graduate program to be designed, in whole or in part, specifically to assure these qualities. They are rather regarded as the general product of home, church, society, and school—perhaps also as a by-product of a good liberal education and of inspiring associations in the graduate school.

At the present time, there are no master's degrees which are commonly accepted as certifying all or any one of these qualifications for college teaching. Obviously, some "re-forming" of the master's degree will be necessary if we are to make it, in fact and in symbol, properly preparatory for college teaching. The present master's level in graduate education displays many different *types* of degrees. Moreover, there are wide differences not only between these types but between different programs within each type. The differences may be summarized under four heads:

Intrinsic objectives and extrinsic purposes. According to different intrinsic objectives, types and programs may be distinguished as academic (as, for example, a traditionally organized Master of Arts program in English literature), professional (as, for example, programs in marketing, orthodontics, and so forth), semiprofessional (as, for example, some programs in clinical psychology). We may distinguish, also, programs intended to prepare elementary and/or high school teachers in subject-matter fields. Among the professional and semiprofessional programs, those preparing for specialized functions in the school system, such as administration, counseling, remedial reading, and so forth, might also form a separate class. There are also differences in the use made of the master's degree at different institutions. In some institutions, the master's degree has been used as a consolation prize, indicating a truncated doctorate rather than a positive program of its own. The pressure of accrediting bodies and state departments of education has added another extrinsic pressure and purpose so that some programs might be considered as designed rather to meet certification requirements rather than to achieve any intrinsic finality of their own.

Variants in designations and means at the master's level. The confusion of purpose and program at the master's level is reflected in the increasing multiplicity of degree titles: for example, Master of Arts in —, Master of —, Master of Science in —, and so forth. Over 150 different titles have been listed.

Requirements and programs. It is not surprising then that the requirements for different types of master's degrees are themselves widely different. A program, for example, leading to the degree of Master in Hospital Administration may include twenty-four hours of course work, ten months of internship, and no written thesis or essay; while a Master's in Business Administration may require forty to fifty hours of course work, comprehensive examinations, and possibly a thesis or written project. On the other hand, the traditional pattern of approximately twenty-four hours of course work with a research thesis, final examination, and language requirements can still be found. It should be noted also that the differences in requirements in programs do not simply correspond to the differences in titles and purposes. The Master of Education degree at one institution may signify a quite different program from what it does at another institution.

Quality and standards. The range of qualitative difference at the master's level cuts across all the other differences. Within a given institution, some of the

programs may be of the highest academic quality, while others may represent little more than additional study or even sometimes remedial course work. There are exacting and difficult programs, as well as easy ones, within each type of degree, and a degree which may be held in high regard in one institution may be at the lowest level of quality in another institution.

It is not surprising, then, that the master's degree seems to have lost both definite meaning and general respect. While we still take the Ph.D. per se to signify an unusual academic achievement and a rather definite kind of education, we regard the A.M. as having little or no per se force. In view of this general degradation of the master's degree, those who would wish to make it a standard and accepted certification for college teaching speak of "rehabilitating," "reviving," and even "exhuming" the master's degree.

In discussing the possibility of the proposed master's degree, let us go back, in part, to our list of requirements for college teachers:

Mastery of knowledge. The present doctorate program is commonly accepted as certifying adequate knowledge of a discipline. We can divide the doctoral program into two phases, the first being the completion of course requirements, language requirements, and so forth, up to and including the preliminary comprehensives; the second being the research for and the writing of the dissertation. We shall have to ask ourselves whether the knowledge acquired in the first phase is necessary for college teaching. This knowledge is usually defined extrinsically as approximately two years of course work or of fifty to seventy credit hours of course work, or, finally, as the mastery of the field in general and of the area or areas of specialization which is required for the comprehensive examinations. If we decided that this amount of knowledge is necessary, it would appear that any master's degree would be inadequate on this score or else that the new master's degree would have to coincide fairly closely with the first two years of the doctoral program.

If we do not need knowledge of this amount and kind, how can we reduce it to what is both necessary and adequate? In the light of all the discussion, it would appear impossible to reduce the master's degree to less than one year of graduate course work. We may then ask whether the training received in doing the dissertation is necessary or most desirable for qualifying college teachers. If it is not, then perhaps we could omit any substitute for it from the new master's degree. If this sort of training is necessary, then we shall have to ask whether a reduced dissertation or some other substitute could more quickly and more efficiently achieve the same purposes.

Liberal education and intellectual maturity. It would seem obvious that any good program devised for the new master's degree would contribute to the general education of the student. The question here would be whether the program ought to be planned with some emphasis on *greater breadth* of knowledge and interest.

Professional knowledge, training, and experience. We shall have to determine whether a degree certifying preparation for college teaching must also certify some professional preparation through special course work, through apprentice teaching, or through both means. If we decide that the degree itself should include some such training, we shall have the further problem of integrating it with the basic objective of achieving adequate knowledge for college teaching.

If we do succeed in outlining a program which would be adequate, under the three previous rubrics, for the preparation of a college teacher and which would yet not coincide with the doctorate program, we shall have to select a title for the degree and establish its general acceptance. Here, several problems will confront us. First, collegiate and graduate education in the United States has been remarkably resistant to the establishment of new degree titles. Almost invariably such degrees develop a second-class reputation and are looked down on by both students and employing institutions. Secondly, the present confusion with regard to the meaning of any of the master's degrees now offered would make it very difficult to reach agreement on any one of these degrees, as well as to establish or re-establish its general acceptance as certifying preparation for college teaching.

I would mention three alternate suggestions: 1) Maintain the present doctorate program as the commonly accepted preparation for college teaching but tighten and compress it by introducing better organization into the course work and reducing the size of the dissertation in its disciplines. 2) There is a constant recurring suggestion that a new doctorate-level degree be designed especially to prepare for college teaching rather than for research. 3) Since advancement to candidacy is a formal academic action of the graduate school and has a definite academic meaning, and since, moreover, it commonly signifies completion of all the doctoral training except the dissertation, let "Cand. Ph.D." be emphasized as a definite academic status qualifying for college teaching, while at the same time remaining open to completion of the doctorate through the dissertation.

NOTE: Panelists on this group were OLIVER C. CARMICHAEL, Consultant to Fund for Advancement of Education and the Ford Foundation; W. FRANCIS ENGLISH, Dean, College of Arts and Science, University of Missouri; ESTHER RAUSHENBUSH, Professor of Literature, Sarah Lawrence College; and WARNER G. RICE, Chairman, Department of English, The University of Michigan. The moderator was DAVID C. FOWLER, Associate Dean, The Graduate School, University of Washington; the recorder was JOSEPH AXELROD, Professor of Humanities, San Francisco State College, on leave as Director, Inventory of Language and Area Centers, American Council on Education.

Maintaining Curricular Balance in an Era of Expanding Governmental Activity and Financing, Growing Industrial-Business Interest and Financing, Periodic International Crises, and Strongly Held Societal Values

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TO PUT THIS MATTER OF BALANCE in the curriculum into some perspective, let each of us think of the bulletin of our own institution. Let us run our eyes over the curriculum. Most of all, let us remember that the official curriculum, the "course-offerings," the sequential set of "learning experiences" comes to life in our classrooms and laboratories, in our libraries, and on our campuses.

Let us advert to a further fact; namely, that the curriculum "in being" is in pretty much the same situation as a living organism which exists and interacts with a total environment. If one adopts this more or less domestic view, he may then draw a number of imaginary circles around the institution and its curriculum. Within the first of these he will locate the forces and impact of contemporary popular culture. In a second, he may fix the main drift and influence of the business community. A third ring may be used to freeze the dynamic influence of government—at all levels. Finally, in a fourth, one may engage his thought with the nation's position in international life.

Provided, now, that we move ourselves and our circles through the onrushing factor of historical time (say until 1975), we may proceed to identify the significant factors in each circle.

The first circle: the convictions and expectations of American society. While reflecting on this delicately textured reality, we ought to assess, if we can, its main bearing and drift. Already in a rapid period of transition, American society, culture, values, convictions, hopes, and fears will—with little doubt—shift still more radically during the next fifteen years.

May I suggest these as the strands of our cultural picture which I believe to be the most relevant to our task:

1. For the most part, the prevailing characteristic of the American mentality is and will remain intensely practical. Combined with this historical bent is the actual "configuration" of our mentality by the natural sciences. Most of our modes of thought are "scientized." So much is this the case that modes of feeling, of thought, and expression—historically considered as "humane"—are yielding to the general mentality just adverted to.

2. At the same time, however, the popular mentality is not completely at home with itself. And there appears to be a strong and widespread interest in other types of human culture: music, the fine arts, "good reading," morality, religion, history.

3. Work, the employability of young people, their immediate preparation for jobs through school are and will remain basic expectations of all Americans.

4. In effect, the American appetite for learning will remain omnivorous. Every kind of education will remain in high esteem.

5. An ambiguity arises, however, in the popular conviction. On the one hand, Americans will insist on education (and higher education) for all. This insistence will apply to the hordes of students allegedly with us and to come. For all of them, the public will consider that a *degree* of some kind is a genuine necessity. On the other hand (I hopefully think) there is a current of appreciation for intellectual attainment of a high order, for real quality in higher education.

6. Along with this outlook, there appears to be a genuine feeling of resentment at any thought of the formation of an elite in America, even of an intellectual elite.

7. Finally, it does not seem that the American people will alter their view that higher education must "serve" the people and the nation.

The second circle: the interest and money of the business community. Under this rubric, let me hasten to add, I would include the "labor community." Hence, what we shall attempt to identify are the influences and interests of this vast community of persons—the overwhelming majority of Americans.

Beyond any question, the interest of business is greater than at any other time in our history. No doubt, it will continue to be so. Whether this interest is spontaneous (as some may think) or carefully cultivated by education itself (as I think) is beside the point. There it is, and it will remain.

1. For most of us, the business community is the local firm which hires our students. This businessman is practical, down to earth, exacting, expectant, sometimes hopeful, and often disappointed. He is the hirer, the recruiter for today's job in today's world. Understandably, he may be impatient with the broader, more long-run policies of higher education.

2. Standing back of the recruiter is the business-education statesman (often a revered benefactor). His public utterances often imply an ideal of education which only the most sanguine of us would dare to hope for. He is a friend of the liberal arts, the thinker, the planner, the creative nuisance who causes trouble in the personnel department.

Often, however, this man—looking into the future—does become more than a public relations pleader. He does not wish "to run" a school. But he ardently hopes that higher education may equip itself to meet his needs in ways that—though less immediately useful to him—will in the long run benefit the community, his business, the entire business community, and the nation.

3. More and more, men and women from the world of management and labor are occupying critical positions in the decision-making apparatus of higher education. Most of us welcome them—and for the best of reasons. They provide a sense of relevance and immediacy to the deliberations of faculty bodies and executive groups. Acquainted as many of them are with unsolved problems, they can direct our attention to possible improvements in educational practice, or they can and do point out areas where solid work is needed.

4. At the same time, however, live business interest can jostle the institution into ill-considered moves. There is always more to be done for an active and alert business community. Institutional assessment is a heavy responsibility. So, also, is the task of resisting a vocationalizing of the person and the curriculum.

5. What appears to be really significant about the "interest" of the business world is that it is being institutionalized by almost every educational institution in America. Higher education is more and more reliant upon the financial support (however various the form) of business. This dependence is being built into the very structure of the college. Along with this, the brains and time of business people have been canalized through the instrumentalities of committees, faculty visitors, advisory councils, and boards of trustees.

6. Almost too obvious to mention is the continuing need on the part of business and industry of highly educated specialists. This need will continue.

The third circle: expanding government activity and financing.

State and local governments. Educational planning and organization have become bywords of our day. There are regional planning authorities, city and state-wide commissions, ways and means committees over the length and breadth of the land. All the while, of course, the taxpayer is involved. And since he is, he affords a means of gauging the leadership and tolerance point of the American people.

Americans are now willing to pay more and more for education of all kinds. The municipal, the community, and the junior college: All have burgeoned since World War II, and there seems no end. Quality education is more or less accepted by the general public (and by their public representatives)—provided that all young people have a chance to try. The amount of quality encouraged (or tolerated) varies greatly from one part of the country to another. Fundamentally, however, there is official and unofficial zeal for *school education for all.*

The federal government. Meanwhile, back in Washington, all types of assistance to higher education grow apace. No one, as yet, has measured the impact of federal programs on the curricula of American higher education.

Sponsored research has become, in most quarters, the most suspect of all governmental activities. When its influence has been denounced, reference is usually made to the fact that teachers leave the classroom, or that teaching has last place, or that students (particularly graduate students) have been directed into research projects which really lower their creative responses rather than heighten them. Critics point out, too, that many educational institutions have become totally dependent or almost so upon the moneys which result from sponsored research. More serious, perhaps, has been the danger pointed out by the American Civil Liberties Union that progressive engagement on a large scale tends to rob the institution of its freedom of determination.

In point of fact, however, I have come to settle for two general positions regarding federally sponsored research: that most of the bad effects resulting from sponsored research are indigenous to the presence of research itself, and hence, adequate institutional policy would pretty well heal the situation; and that what may be really injurious to the integrity of the curriculum is that the massive volume of sponsored research serves to heighten emphasis upon the practical, the here and now, and the natural sciences to the comparative neglect of other curricular matters.

The fourth circle: periodic international crises. If it is permissible to separate matters of security and international life from those that concern the inner life of the nation, the former represents the most taxing challenge to our ingenuity, our work, and our level of performance. Here we cannot afford to be second best, or to waste our human resources, or to trifle with the small luxuries. At the same time, however, we cannot tolerate a serious imbalance in the quality of our national life.

1. No one, it seems to me, can question what will undoubtedly be the fact; namely, that our precarious involvement in international life will continue. Crises there will be. No one can foretell the time, the place, or the character of the disturbance.

2. For the better part of another generation, America will stand—willy-nilly—as the leader of the free world. By 1975, the predicted dispersal of power may have occurred. By then, we and Soviet Russia may be joined as major powers by Red China, Africa, and certainly by Western Europe.

3. Whatever the private politics of people may be, it seems to me that all kinds of isolationism are dead. We cannot ignore either the facts of international life, or other peoples, varying forms of governments, other cultures, histories, and languages.

4. It appears certain that American commercial policy will be involved more and more with regional trading groups. In addition, then, to new types of problems for business, there will be more and more call for persons educated in non-American languages, culture, ways of doing business.

5. Lying more closely to the heart of the whole matter is the incessant need for men and women highly educated in contemporary science and technology. This need alone will progressively heighten governmental emphasis upon these types of personnel. But, along with the scientists and the technologists, we shall be in dire need of persons in decision-making roles who are not scientists and technologists. In addition, the growing gap between the humanists (who know little of science) and the scientists themselves must be closed.

Now, having examined the factors in these four circles, let me suggest that we examine the following propositions.

As never before, it behooves the educational planner to "take a stand." With the temper of the public what it is, with the growth of statesmanship within education what it is, and with challenges before us that are simply overpowering, we must make up our minds.

But, make up our minds on what, for what reasons, for what persons, and for what ends? In the direction, I submit, of quality and excellence, in favor of the needs of students for their whole lifetime, toward a clear delineation of the relative importance of subject-matter areas. Not every area of study or set of

learning experiences has the same value to the student, or to American society, or to mankind. In effect, the music is already playing, and it must be faced.

Balance in a course of studies cannot be understood, then, simply in terms of a reasonable spread, or merely what the student likes. It is time to inject the notion of what is worthwhile, what is genuinely needed by the student, what society as a whole requires. More than this, excellence needs to be sought in the level of challenge offered to the young student. Balance is, also, to be sought in terms of offsetting or correcting one-sided drifts in American culture and education.

Higher education is a human enterprise. It is creative. It is something that one deliberately plans, builds, and carries through. If our own creative powers are not applied to a mastery of the problems inherent in the situations described, the problems simply will not be solved.

To get the job done, an entirely fresh start needs to be made. This start involves personnel, a program, and a philosophy which may and should turn out to be more exacting than any we have hitherto known.

Personnel. Each institution must create an effective commission on planning and policy. The work of such a body cannot be something done after hours, in free time, after class, or when there is nothing else that needs doing. The members should include the most perceptive and far-seeing available. Their purpose is curriculum planning and curriculum policy making; it is not fund raising, public acceptance, or any other goal (however worthy or however much needed). The group should be obliged to make an analysis of the total effective educational environment (not—as is usually done—of "our clientele"). Viable means of communication should be established with the academic community generally, with business, and with the public.

Program. If the word is not too strong, I would suggest that curriculum planners take the view that they are in a situation which is basically one of conflict. If this view is adopted, it will become clear that the business of higher education is by no means the simple task that many of us have thought it to be. It will be clear, too, that not every pressure exerted upon the institution can or should be honored. Each must, in turn, be carefully and wisely distilled to ascertain those of genuine significance to the total education of young people. It is not my point to suggest that education become remote in its response or appreciation of public needs and the public interest. I agree wholeheartedly that our salvation lies in the society of which we are a part.

Such a program of institutional planning and decision making must include, at least, the following stages: 1) a short-range program of fact finding and evaluation. (Joined to this should be sharp, but realistic, decisions on what alterations of the curriculum are now possible. These will be found, no doubt, to be few and—perhaps—even insignificant from a long-range point of view); 2) a serious questioning of institutional purposes. Customarily, these purposes are honored. And it is well known that the adopted purposes of institutions are seldom called into question even by accreditation examiners. But this questioning I would call a middle-range problem. If the job were done seriously, most purposes would be clarified, sights raised, and—in the sequel—a program for the really able would be adopted.

Included, also, should be a long-range target. This would be a function of

the achievable and the desirable. At this point, a careful long-term analysis of student abilities, student needs, and the needs of the total environment would be of most value.

Philosophy. By this term I mean a developed policy for the construction of a curriculum plus the reasons for particular positions taken. This developed policy would include, among other things, the basic view of the human person who presents himself at our door for our education. The development of this view is of the first importance and is the key to the whole matter.

For the rest, I would suggest that most curricular matters should prove amenable to solution in the light of a series of carefully enunciated operational theorems.

Relying, now, on the problems discussed above, I believe that the most important could be stated in this way:

1. The life interests of the persons we educate are not restricted to the immediate or long-range interests of the social community in which each lives or will live. Hence, the temper of higher education cannot be that of a conditioning process for life in human society, however important this be.

2. At the same time, however, the progressive level of society depends precisely upon the quality of the persons who make it up and upon their developed abilities and their responsibility.

3. Higher education, then, can be envisaged as a means for evoking the best from the raw, individual abilities of all its members. Common sense will recognize that these are by no means equal.

4. Maximization of these abilities does not necessarily imply that all students can or do benefit from higher education.

5. For some years, remedial programs may be necessary. For some years, too, existing institutions may be compelled to accept and "do what they can" with many who should not be in college. By policy, however, both measures should be of a stopgap or middle-range variety.

6. Insofar as an institution of higher education consents to do on-the-job training or for-the-job training, it should do so only with the full consciousness that this is tolerable only *pro tem*.

7. At the same time, however, higher education need not abandon all those young people who have neither the desire nor the ability for college-level education of quality. Either or both of the following would be permissible and advisable: They should be regarded as terminal students (but short of the bachelor's degree); or existing institutions or new ones may receive them with their tutelage as a special objective. But—in any case—an operationally valid determination should be made of the collegiate student, and he should be educated in colleges with his development their fixed (and unadulterated) objective.

NOTE: Panelists for this group were REUBEN H. GROSS, Research Associate, Carnegie Foundation for the Advancement of Teaching; CHARLES V. KIDD, Associate Director, Institutional Relations, National Institutes of Health, U.S. Department of Health, Education, and Welfare; and J. KENNETH LITTLE, Director, Survey of Federal Programs in Higher Education, U.S. Department of Health, Education, and Welfare. Moderator of this group was WEIMER K. HICKS, President, Kalamazoo College; the recorder was HARRY C. KELLY, Associate Director, Educational and International Activities, National Science Foundation.

The Trimester Plan of the University of Pittsburgh

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THE UNIVERSITY OF PITTSBURGH has inaugurated a plan of operation in which the academic year is divided into three terms of fifteen weeks each. The first term starts on September 1; the third term ends the last of July. Rather than spending thirty-two or thirty-four weeks of the year in study, students may now spend forty-five weeks. Participation in the plan is voluntary, but the student who attends all three terms may earn his bachelor's degree in two years and two terms, and a master's degree in addition in no longer total time than the bachelor's customarily requires. Or he may complete his bachelor's and doctoral programs in five full years instead of seven.

This action involved far more than a mechanical manipulation of dates and weeks into a tidy schedule. For us, the new plan was a means of bringing about a reappraisal of our educational programs and the changes which are necessary if we are to serve our students and society with maximum effectiveness.

Why was this drastic, perhaps revolutionary, innovation undertaken? Two kinds of reasons guided us: academic and administrative.

The academic reasons are primary. First, we believe that the educated man today must have both a liberal and a professional or graduate education to cope with the complexities of the modern world. Neither a narrow professional education nor a liberal education alone will prepare a student for maximum service to a society which requires of its leaders not only the basic human understandings and values which a liberal education can supply, but also the professional skills which a complex civilization demands. Possibly the greatest single impediment to a liberal *and* professional education is the length of time required under the traditional calendar. The future medical doctor has eight years of obligations including military service after four years of college. He is probably over thirty before he can enter private practice.

Second, our students and faculties must find time to cover ever-growing bodies of knowledge. The Problems and Policies Committee of the American Council on Education recently issued a report in which it refers to "the ex-

plosion of knowledge" and asserts that "the increasing complexity of today's social, political, scientific, and economic structure requires of an educated person such information and understanding as could not have been imagined a generation ago." While college involves much more than memorizing facts, there is a constantly increasing quantity of material for the student to encompass.

Third, students must be ready to take their places in society at an increasingly early age and the colleges and universities must correlate the learning process with the process of maturing. Physiologists have learned much about the age at which human beings mature. As difficult as it may be for parents to believe, it is now known that physical development is complete, emotional patterns are fairly well set, adjustment to society has been made, and the person is ready to begin living as an independent adult human being at the age of twenty or twenty-one. This age marks the beginning of a span of ten years or more during which the individual has maximum amounts of physical drive, energy, enthusiasm, and creativity. It is essential for young people to complete their education and to begin their careers as early as possible in this period of greatest value to themselves, and, in turn, to society.

To accomplish these three ends, academic programs can be expanded, standards can be raised, plant and equipment can be augmented. The only inelastic factor is time. Yet, *time* is of prime concern in realizing these objectives. The *time* available for the education of young people cannot be increased—why not use it as fully and as efficiently as possible? It no longer seems sensible to allow students to spend the equivalent of one year out of four in activities that do not further their formal education.

In addition to academic reasons, pressing administrative reasons support a year-round program. Common to most colleges and universities is the necessity to accommodate the vast numbers of students who will be ready for higher education within the next decade. In the face of this unprecedented increase, it is not only indefensible but unthinkable to permit educational facilities to lie virtually idle for over three months a year. Philip H. Coombs, formerly of the Fund for Advancement of Education and now Assistant Secretary of State, estimates that "institutions use their available classrooms at only forty-six per cent of capacity . . . and their laboratories at only thirty-eight per cent of capacity."

Higher education must utilize what it has before it turns to its friends, legislative or otherwise, for additional support. In my state, it is estimated that the trimester calendar will reduce the money needed for physical plant by forty per cent and we will still need several hundred million dollars.

Increasing numbers of students mean an increase in the number of faculty. Pennsylvania needs more than 20,000 more instructors by 1970 and it is doubtful if more than one half this number can be found. Either thousands of students will be refused admission or very radical changes must occur. Better use must be made of existing faculty resources and larger numbers of qualified people must be attracted to the teaching profession. If trimester were generally adopted, it would reduce the number of additional teachers needed in the years ahead and it would provide them with a higher yearly income than they now enjoy.

A third administrative reason relates to the costs of maintaining our institutions. Thirty-five per cent of our budgets are with us whether we operate on a

nine-month or a twelve-month basis. Libraries, debt service, building maintenance, and a substantial part of our administrative costs continue whether we are "open for business" or not.

What have been the results so far? We are only in the second year of the plan and our observations about results are very preliminary and tentative.

For one thing, students have shown more interest than we anticipated. Half of those eligible registered for the third term last year. Studies have *not* supported our hypothesis that most of the students enrolling in the third term would be the better students. Except for liberal arts males, there was no significant difference in the quality of the students who enrolled and the qualtity of those who did not. This judgment was based on a comparison of their high school performances and entrance test scores.

A study of the extent to which the trimester calendar has met the academic, social, and economic needs of the student gives us this partial description of the student who attends the third term. The student is an older male who is enrolled in an undergraduate, goal-oriented, or preprofessional program. He is an upperclassman who in any term normally carries a heavy credit load. His home is close to the university, and he drives to classes. Generally he does not participate in formal student activities. To him, course offerings during all terms were adequate to his objectives. His opinion of the trimester program is favorable and because of the program he will reach his vocational and educational goals at an earlier date. He also believes that the trimester calendar has considerably improved his chances for continuing his education beyond the baccalaureate degree.

The intercollegiate athletic program has presented some difficulty, especially with respect to eligibility. The problem is under study and we are hoping that eligibility may be determined by the number of years an athlete participates rather than by the possession of a degree. In the meantime, the athlete who wishes to participate in intercollegiate competition for three years on varsity teams must forego the acceleration feature of the trimester plan. This is for the student to decide.

Many important changes have taken place as a result of the re-evaluations of existing programs and procedures which the new calendar required. Because of a tightened schedule, the registration procedure was streamlined and a system of preregistration was adopted. Preregistration has made possible more intelligent planning and preregistration demanded a better advisory system. A thorough reappraisal of the curriculum with the resulting pruning of courses has been one of the most significant by-products of the new calendar. We have brought about specific curricular improvements as we reduced the number of courses, improved the content of our major fields, and gained a new consciousness of the need for systematic revision of curricula.

Our faculty seems happy. Many had over thirty per cent increase in salary. Many had a longer period for research than the summer months had previously permitted. Last fall we added 110 new faculty—all of whom knew what they were getting into and seemingly were attracted by the possibilities for longer periods for research or teaching afforded them by the new plan. We have no intentions of operating an academic slave market. We expect to limit the number of consecutive terms a faculty member can teach.

Perhaps the most important result is the effect on attitudes. We sense a new attitude among our students. Faculty members tell us students are working harder—utilizing their time better. President Kirk of Columbia argues that: "There is a vast difference psychologically between breezing through college in four years and buckling down to three years of hard work. A youngster who must concentrate on intellectual challenges forty-five weeks a year to survive rigorous competition is sure to cultivate better study habits than he does now . . ." Time is a valuable resource that must be carefully nurtured, and, when combined with human ability, can have far-reaching consequences for the betterment of the individual and our society.

Why did Pittsburgh not adopt the quarter system or emphasize the possibilities of the extended summer session? Simply because, in actual practice, the change from the traditional calendar was not sufficiently marked to encourage most students to change their attitude toward summer study, an essential to the success of any plan for year-round operation.

NOTE: Chairman of section 1 of this group was C. O. WILLIAMS, Assistant to the President for Special Services, The Pennsylvania State University; the recorder for section 1 was PAUL E. COLLINS, Dean of Men, Kalamazoo College; the resource persons for section 1 were JOHN X. JAMRICH, Director, Center for the Study of Higher Education, Michigan State University; and TRUE E. PETTENGILL, Recorder, University of Minnesota. Chairman of section 2 was FRANCIS H. HORN, President, University of Rhode Island; the recorder for section 2 was B. LAMAR JOHNSON, Professor of Higher Education, University of California, Los Angeles; the resource person for section 2 was ROY N. JERVIS, Dean, North Side Teachers College at Chicago.

Evaluating the Total Climate or Profile of a Campus

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STUDENTS, PARENTS, EDUCATORS, SOCIAL SCIENTISTS, and other observers or participants in the business of higher education know that all colleges are not alike. Between some colleges the differences are great and obvious to all. Between others more subtle distinctions are made. The campus atmosphere is a little like the weather: It is talked about and it is felt but it is difficult to explain. I shall not presume to explain it either, but I should like to comment briefly on various ways of looking at the campus atmosphere, to describe one particular way which George Stern and I have been exploring in research at Syracuse during the past few years, and to suggest some of the actions which may be required if one wishes to change the atmosphere of a college.

In most catalogues and conversations about colleges there is, at least implicitly, a belief that the special atmosphere of a campus is partly a matter of geography and certain social and vital statistics. Is it rural, urban, large, small, church related, nonsectarian, public, coeducational? The small college in the small town points to its friendliness and its fortunate removal from metropolitan distractions. The big college in the big city enumerates its specialized services and its enrichment by the cultural offerings of the metropolis. And so it goes, with each feature contributing to the special tone of the campus.

Other factors commonly believed to account, in part, for the atmosphere of a college are its special facilities and programs. Beyond the obvious classrooms, dormitories, and library, what are some of the prominently visible and frequently mentioned facilities? Chapel, special laboratories, museums, dance studio, art studio, gallery, concert hall, theater, football stadium, field house, hockey rink, fraternities and sororities, student union? And what programs are offered? Forestry, pharmacy, nursing, home economics, business, engineering, education? And what major fields within liberal arts? These of course influence the campus atmosphere by helping to determine how students may spend their time; and students who wish to be engaged in certain activities

will, within limits, go to colleges where these activities are possible—for example, to become an engineer, or a nurse, or to play football, or participate in a theater. In this sense, facilities, programs, and people are related influences on the campus atmosphere.

But the people themselves are also a special and pervasive influence. The character of any college surely owes much to the character of the students it admits. Across the wide array of colleges and universities in America there is a tremendous diversity of students, a vast range of abilities, interests, attitudes, and ambitions.

We have now mentioned three lines of influence in the campus atmosphere —geographic and demographic factors, facilities and programs, and the characteristics of the students who are enrolled. As educators we naturally like to think that the faculty and administration have something to contribute to the general campus atmosphere, so we turn next to this influence.

In their recent book, *The Academic Mind*, Paul Lazarsfeld and Wagner Thielens observed a number of relationships between the characteristics of the faculty, the administration, and the institution. For example, teachers who were primarily oriented towards their discipline and the profession at large were more likely to be productive scholars than teachers who were primarily oriented toward their local institution. The better the college, in scholastic standing, the more of its teachers were cosmopolitan (oriented to the profession at large) and permissive (meaning critical minded and tolerant of new ideas). Also, the better the college, the better its administration protected its faculty (from alumni, trustees, legislators, the general public, and Congressional committees). These are elements which contribute to faculty excellence and morale and to respect and confidence in administrative leadership. Faculty teaching load contributes to campus atmosphere too. There are many colleges where professors are expected to teach four or five courses each term. There are others where many professors teach only one or two courses per term, the rest of their time being devoted to research and the pursuit of their general scholarly interests. These conditions have a differential attraction, determining what kind of people are employed. There are differences also in the style of student-faculty relationships. Some are typically warm and friendly and encouraging. Others are typically cool and remote. Some deal comfortably only with the substance of what is being taught. Others deal comfortably with the substance of who is being taught. And, just as programs and facilities influence the kind of students one gets, so they also influence the kind of faculty one gets. There are also, of course, other administrative conditions which influence campus atmosphere—the financial resources of the college, the tuition, and the number of scholarships, to cite just three examples.

There are special ways of looking at campus atmospheres which come from the concepts of sociologists and psychologists. These are less familiar to many people but they are potentially powerful because they employ concepts from sociological or psychological theory. It is not feasible in this brief report to discuss many of these useful concepts, but a few of them can at least be mentioned: the concept, for example, of the student culture as a network of interpersonal relations, the concept of membership groups and reference groups, the concept of the student environment as a status system, the concept of role

behavior and role expectation, the concept of personality need and environmental press. The concepts of reference groups and role expectations have been prominent in the studies of medical schools reported by Robert Merton and others. The concept of the environment as a status system in which certain types of activities are more highly rewarded than others has been prominent in the recent studies of high school climates by James Coleman. The detailed plotting of the complete network of interpersonal relationships among the students at Beloit College is currently under study by Peter Rossi. The concept of environmental press has been used in the studies of college environments which George Stern and I have been undertaking. Let me explain, now, what I mean by environmental press.

In our original work, following the theorizing of Henry Murray, we thought of environmental press as a counterpart to personality needs. Just as one might think of various activities which suggest a tendency toward a need for order in a personality, so also one might think of events or features on a college campus which suggest an orderliness about the environment, such that it would be satisfying to a person with orderly tendencies. This was the basis for constructing a measuring instrument, called the College Characteristics Index—thirty environmental press scales intended as parallel counterparts to thirty personality need scales. The test consists of 300 statements about the college environment—about the professors, the students, the activities, events, facilities, rules, etc.—and students respond to these statements by indicating whether they believe them to be generally true or characteristic of their college. The test has been tried out in about 100 colleges and a good deal is now known about its properties as well as about the characteristics of the colleges.

In my own thinking, more recently, I have tended to diverge from the original theoretical notion of need-press parallelism, and to concentrate on the environment as a distinct and not necessarily parallel problem. I have been referring, instead, to what I call the effective environment. The effective environment is that which the students are aware of and agree with reasonable unanimity is true or not true about the college. The assumption (and there is some evidence to justify it) is that this aggregate or group awareness of students about their environment constitutes a press in the sense of exerting a directive influence on their behavior, or setting conditions with which they must deal.

In the *College Board Review* last spring, I reported a factor analysis of the thirty environmental press scales across a sample of thirty-two colleges, and noted also that the variables which tended to group together across this diverse sample of colleges also tended to group together within the environment of individual colleges. Two of the five groupings were predominantly intellectual —with one containing greater emphasis on humanism, reflectiveness, and sentience, and the other containing greater emphasis on science, change, and a relative absence of supervision and order. The third grouping emphasized practical and applied influences, and a concern for establishing status in relation to one's peers and accepting status in relation to authority. The fourth grouping emphasized a press toward group welfare, citizenship, and social responsibility. And the fifth was described as a rebellion against the well-managed, group welfare orientation.

When institutions are classified according to these major groupings, several interesting facts emerge. Colleges high on the intellectual emphasis may be rural or urban, large or small, denominational or nonsectarian. The same is true for colleges that are high on the practical, status oriented variables. In other words, some of our familiar classifications of colleges tell us very little about the character of the environment.

Last year, I reclassified the items in the CCI according to a different set of categories, suggestive of the sources of press within the environment. Nine categories were used. The first three fell into what I call the administrative community, and consist of statements which refer to rules and regulations, facilities, and special features. The second three are concerned with the academic community, and consist of statements which refer to the faculty, the curriculum, and instruction. The third three refer to the student community, and consist of statements about students, extracurricular programs, and informal student activities. Then, instead of dealing with thirty press scales, I followed the results of the previous factor analysis, and combined relevant scales into four major areas of press or emphasis—humanistic, scientific, practical, and social welfare. In filling out this more restrictive and somewhat different classification system, it was necessary to write some new items, to revise some old ones, and to discard many old ones. The new combination consists of 210 statements, fifty-four per cent of which come directly from the CCI, nineteen per cent of which come in slightly revised wording from the CCI, and twenty-seven per cent of which are new. For experimental purposes these items have been assembled under the title of the College Characteristics Analysis, with Analysis suggesting the analytic and diagnostic feature of the item classification system. My intent now is to explore the diagnostic utility of this experimental supplement to the CCI.

What I am suggesting is that rules and regulations, physical facilities, special features, the characteristics of faculty members, the curriculum, the manner of teaching, the characteristics of students, extracurricular programs, and informal student activities all contribute to the atmosphere of a college, the total campus profile. More importantly, I am suggesting that these are not separate or discrete sources of the atmosphere but rather that they fit together in a pattern.

For example, rules which permit students to help themselves to books in the library, or to cut classes at their own discretion; facilities for theater and individual creative activities; special features such as the reputation for academic freedom; faculty members actively engaged in writing; courses which demand intensive study and preparation; class discussions which are vigorous and intense; students who commonly have long, serious, intellectual discussions with one another, set high standards of achievement for themselves, and are attracted to concerts and art exhibits—all these fit together to create an emphasis on humanism, reflectiveness, and sentience in the total atmosphere.

Or, for example, rules which give student government a responsible role in regulating student behavior; facilities which provide pleasant rooms for student organizations; special features such as emphasizing proper social forms and manners; faculty members who are active in community work; courses in which the goals are clearly explained; teaching which sometimes assigns papers or

reports to committees or small groups; students interested in jobs which involve working with people, who play an active role in helping new students adjust to campus life, and who have a lot of group spirit—all these fit together to create an emphasis on citizenship, group welfare, and social responsibility.

Or, rules which quickly drop students from school who are not making passing grades; new buildings which exemplify the best in modern architecture; a lack of emphasis on the history and traditions of the college; faculty members who are actively engaged in research; courses in which students carry out experiments and interpret the data; teaching in which the professors do not regularly check up on the students; students who don't care much about the appearance of their rooms, who like to talk about science, and who like chess and other abstract games—all these fit together to create an emphasis on science, independence, and change in the total college atmosphere.

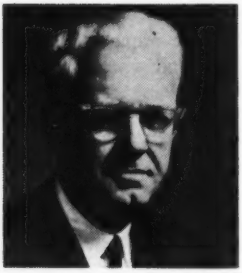
And finally, rules which give student leaders special privileges, facilities such as a well-organized and effective job placement service, features such as the prevalence of apple polishing, faculty members who are always addressed as professor or doctor, courses which emphasize vocational values, teaching in which students wait to be called on before speaking in class, students who are mainly interested in specialization, and are extensively involved in intramural activities and lots of dates, parties, and social activities—all these fit together to give a practical, status-oriented emphasis to the total environment.

It is possible that none of the things I have cited in these examples is, separately, of crucial importance. The significance of all these pieces lies in the way they "add up." To the extent that a college environment is an unrelated assortment of policies and practices and events and features, its influence on the student is probably small. The special atmosphere of a college probably comes from the cumulative relationship which exists among its many parts.

Is the student community supportive of or at odds with the objectives of the academic community? And the administrative community? These are illustrative of the questions one might ask if changes in the campus atmosphere are sought. It is not enough to modify a curriculum or raise admissions requirements or introduce an honors program. Such changes, if they are intended to raise the intellectual level of a campus, must be supported and reinforced by other changes—by rules involving class attendance and the use of library books, by appropriate facilities, by changes in the manner of teaching, by the way of treating student organizations, etc. A campus is a culture in the anthropologist's sense of that term. But it is a distinctive culture only to the extent that many of its pieces fit together in a coherent pattern, thereby creating, in fact, a dominant press.

NOTE: Chairman of section 1 of this group was ROBERT F. SULLIVAN, Associate Secretary, Commission on Colleges and Universities, North Central Association; the recorder of section 1 was MICHAEL NEFF, President, Student Center, University of Illinois. Chairman of section 2 was HUGH E. DUNN, S.J., President, John Carroll University; the recorder of section 2 was JOSEPH SEIDLIN, Dean, The Graduate School, Alfred University.

Effective Means of Evaluating Programs in Small Colleges and Developing Long-Range Plans When Limited Resources for Planning Are Available



A. T. HILL

Executive Secretary
Council for the Advancement of Small Colleges

THERE IS NO QUICK AND EASY FORMULA for evaluating a college. Two studies made of institutions holding membership in the Council for the Advancement of Small Colleges (CASC) will document this.

The first study is an analysis of the results of an all-member student testing program conducted in the spring of 1957. The area tests in the humanities, social sciences, and natural sciences of the Graduate Record Examination (GRE) were used in this program. Although CASC scores were lower than the national scores, they were not enough lower to warrant the generalization that lack of regional accreditation was synonymous with a poor education—particularly when approximately one-fifth of the CASC group scored above the national level in each area.

However, there is a by-product of this testing program of great significance. CASC was interested in evaluating the programs of its own members and so it asked this question: Is there any correlation between GRE test scores and the value of the capital assets of a college, its operating costs, its faculty salaries, its tuition, and its size of enrollment? The results indicated a weak, in fact a slightly negative, correlation between brick, mortar, dollars, and high test scores. This would tend to make anyone cautious about leaping to the conclusion that a small college was good academically because it had an expensive physical plant and a handsome endowment. On the other hand, there was a positive correlation between high operating costs and good test scores—particularly when the high operating costs included high faculty salaries. Interestingly enough, there was a distinct correlation between high tuition and high test scores. This would tend to support the conclusion that if you charge students a high tuition fee and pay the faculty decent salaries and operate in a modest rather than an elaborate plant, you will come out with a better academic

performance. And finally, there is the question of size. The evidence is not very strong on this point, but what there is of it tends to favor the smaller college. There was a slight negative correlation between size of enrollment and high test scores reinforced by the fact that the average enrollment in the five highest testing colleges was sixty students less than in the five lowest. This again would tend to make one cautious about leaping to the conclusion that small colleges with small classes and limited resources necessarily imply mediocre faculty and poor academic performance.

The second study which illustrates the difficulty in finding an effective means of evaluating small colleges stems from the experience of CASC colleges in reaching regional accreditation. By March 1958, seven CASC colleges had become fully accredited by their respective regional associations. Therefore, CASC took accreditation as a yardstick for excellence and made a comparison of its other members with the seven just accredited. Astonishingly enough, it was discovered that there were seven more colleges which were older, larger, charged more tuition, and had higher GRE scores than those just accredited! However, these colleges had fewer Ph.D.'s, lower faculty salaries, and a much weaker financial structure. This raised the question of whether the regional associations were evaluating colleges in terms of the academic performance of their students. In order to test this hypothesis, CASC selected still seven more members not on either of the previous lists whose average GRE scores were eight per cent higher than the seven newly accredited members. However, although these high scorers charged an average tuition forty-seven per cent higher than the seven on the accredited list, they were much younger, much smaller, and much weaker financially. Since student academic performance did not seem to point the way clearly toward accreditation and in two cases financial weakness seemed to work against accreditation, CASC made a third comparison. This time it took financial strength as the yardstick and chose still seven more colleges not on any previous list. The value of the average plant and endowment in these colleges was sixty-five per cent greater than those in the seven newly accredited colleges. But what showed up? The enrollment was much smaller, the tuition considerably lower, and the GRE test scores slightly worse than in the case of the original accredited seven!

The point is that even regional accreditation, presumably conducted by experienced and conscientious educators, is still far from being an accurate yardstick or an effective means of evaluating programs in small colleges. Obviously, when it is used as a ready-made screening device by high school guidance counselors or the chairmen of corporate aid-to-education committees, the results can be unfortunate.

My conclusion is that the best you can do is to list a cluster of things which are frequently associated with good programs in small colleges. They are not always present in the same degree. However, it is safe to say that if you drew up a list of twenty characteristics of a good small college and found half or even a third of these items present in any particular institution, you could tell you were on the right track and that you had probably found an effective means for evaluating the program in that college. My list is as follows: 1) good presidential leadership, 2) growth in enrollment, 3) improvement in financial strength, 4) improvement in science program, 5) improvement in qualifications

of entering freshmen, 6) plan for encouragement of superior students, 7) improvement of academic preparation of faculty, 8) adequate student testing program, 9) adequate alumni and public relations program, 10) long-range building program, 11) a distinctive academic program, 12) a program for curricular experimentation, 13) cooperative program with other educational, industrial, governmental, or community organizations, 14) active board of trustees, 15) good performance of alumni, 16) program for improving instruction, 17) efficient use of space, time, and personnel, 18) adequate proportion of budget spent upon library, 19) financial support from industries and foundations, 20) high quality and wide distribution of institutions from which faculty hold degrees.

What follows here is a number of anecdotes about good things that have happened in small colleges as examples of ways in which problems have been solved with limited resources.

Case number one: George Fox College. George Fox is a college with an enrollment of approximately 150 students and a total value in plant and endowment of slightly over $1 million. Its greatest obstacle to accreditation by the Northwest Association was an accumulated debt of $144,000. In January 1957 the board of trustees voted to conduct a drive for funds to pay off the debt in four annual installments by the end of 1960. In the words of their president, "While the campaign was designed to continue until 1960, it went 'over the top' on February 2, at 2:30 p.m., 1959."

The main appeal was made to the trustees, the community, and the alumni. The most spectacular feature of the campaign was the alumni support. The alumni had been a disorganized group for years. However, at the alumni kick-off banquet a motion was made to raise $800. The association promptly raised $8000 and continued up to $20,000 in the following months with the establishment of ten new regional clubs.

In the meantime the college erected a model student union building, established an "Intensified Studies Program" for the encouragement of gifted students, raised faculty salaries, adopted a modernized system of accounting, decided to use a teacher-rating scale as an aid to the improvement of instruction, and achieved accreditation by the Northwest Association.

Case number two: Western New England College and Nasson College. Western New England College in Springfield, Massachusetts, is an example of one college that has done an outstanding job in growth of its science program. In the fall of 1956, its science faculty payroll was $16,000; in the fall of 1960 it was $123,000. This is the only college in its area offering engineering and the only one in its state giving a bachelor's degree in engineering in the evening classes. The college shares the use of a McIlroy Fluid Network Analyzer with the Standard Electric Time Company for the solution of actual problems in fluid control, for demonstration purposes, and for the training of present and future engineers.

Another college with an outstanding performance also happens to be located in New England. It is Nasson College of Springvale, Maine. During the four-year period 1956-1960, the college raised its science faculty payroll from $12,300 to $31,375, increased the value of its science plant and equipment from $52,000 to $111,000, and more than doubled its students majoring in

science. The college hopes to complete a new science building during the academic year of 1962-63 at a cost of $350,000 and believes this will cause an increase of 100 per cent in the number of its students majoring in science. During the past four years, incidentally, this college has erected several new buildings, increased its faculty salaries, increased its enrollment, strengthened its financial position, raised its admissions standards, and achieved regional accreditation.

Case number three: Northwest Christian College. Northwest Christian College operates constantly in the black by the simple device of making the expenditures for next year's budget fit within this year's income with a margin of safety for bad luck. Since, in the last four years, the college has increased its enrollment by nearly 100 students and its fees by $125 per student, and its annual church support from $48,000 to $98,000, and is well on its way with a half-million dollar development campaign, it is not hard to see that this college of limited resources has found a formula for long-range planning with an automatic built-in growth pattern. Incidentally, the development campaign is keyed to a novel idea; namely, "advancing the college a thousand miles at ten cents a foot." There are 5280 feet in a mile. Thus if every dime advances the college by one foot, the goal of 1000 miles equals $528,000. It's a simple trick, but it works. The college has almost reached its "1000 mile" goal.

Northwest Christian can also report one more instructive experience. When the college wanted to build a new library, the estimate by the architects was $267,000. In order to cut this down, the college used its own superintendent, office facilities, and clerical staff; and then it used student labor at a very low cost to supplement a skeleton crew of union labor with a resulting saving of $50,000.

Case number four: William Penn College. This college provides a good example of a college which has tied its long-range plans to an academic idea—the so-called Penn Plan. This has been carefully thought out in terms of the college's objectives, constituency, and geographic location. Briefly, it envisages its graduates in three general groups: those who will go on to graduate school in the arts and sciences, those who will enter the professions of teaching and the ministry, and those who will return home satisfied with a bachelor's degree. For the first group, there is a sound program in liberal arts. For the second, special programs in education and theology are available. For the third group, there are programs in agriculture, industrial arts, and public service, all cast in terms of rural living. A unique feature of the plan is its so-called projective experience, which provides practical work—either on or off campus—in an area closely related to the student's vocational choice.

Certainly, a college with less than 400 students, a plant and endowment of less than $2 million, and an operating budget of less than $200,000 would be considered an institution of limited resources. Yet it is clear from an examination of the self-study it prepared for the North Central Association that this institution has been making consistent progress toward its goals. Salaries have increased, enrollment has gone up, use and facilities of the library have improved, and there are many other signs of steady and consistent progress.

Case number five: Chaminade College, Hawaii. As a final example of a small college planning ahead, I would like to cite Chaminade in Honolulu. This

institution started as a junior college in 1955, became a four-year college in 1957, and achieved regional accreditation in 1960. It has a current enrollment of 300 students, expects to double this number by 1970, has a plant and endowment of less than $2 million with a building program under way. All future plans of Chaminade have been set in perspective by the president in an address to the faculty in which he stressed the religious and educational philosophy of the institution. He put particular emphasis upon a program conducted by an integrated effort on the part of the faculty as well as the administration. Then the plans were turned over to seven committees to be expedited.

This is a young institution with a keen awareness of geographical uniqueness and the services it should provide for an unusual culture going about its business of future planning by a genuine delegation of responsibility to its faculty through a committee structure covering a wide range in the spectrum of college activities.

As executive secretary of the Council for the Advancement of Small Colleges I would like to describe two observations. One is that a good small college with any achievements worth talking about is quite likely to talk about them. In other words it has a good public relations program. Conversely, it has been my observation in working closely with the eighty colleges that have held membership in this association at one time or another during the last years that a college which is not growing in enrollment, which is not putting up new buildings, which is not pioneering in some new academic area, and which is not attracting financial support keeps mighty still about it. Many colleges will claim that they hate publicity and would not stain their pristine academic virtue by anything so crass and commercial as a public relations program, but these are the very institutions which upon close examination are found to be the greatest status seekers in terms of wealth, academic standing, and national prestige. They may conduct their programs with quiet dignity but nonetheless with deadly effect. In any event, if they have a story to tell, you can be sure they will tell it where it will bring them the greatest benefit, and this I take to be a symptom of a good program.

My other observation has to do with responsiveness and group participation. The CASC colleges which read their mail, fill out their questionnaires, pay their dues on time, attend national and regional meetings, send their presidents on fund-raising expeditions, and assume responsibility in one way or another for the success of their association's program are usually the ones which are expanding and improving their own institutional offerings.

NOTE: Panelists for this group were T. W. COLE, SR., President, Wiley College; THOMAS E. JONES, Administrative Consultant, Association of American Colleges; and GUS TURBEVILLE, President, Northland College. The moderator was HARVEY M. RICE, President, Macalester College; the recorder was ROGER C. GAY, President, Nasson College.

Goals and Techniques of Business, Industry, and Government That May Be Applicable to the Administration of Higher Education

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Partner
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IN LOOKING AT PRACTICES IN BUSINESS, industry, and government that may be applicable to the management of higher education, it is necessary at the outset to disabuse ourselves of certain notions or ideas. It should not be assumed that all businesses are soundly managed and make use of all of the most effective administrative techniques, or that all colleges and universities are unsoundly managed. Nor do all government agencies or departments fall into one category or the other of sound or unsound management. There still is ample room for the application of the principles of sound management and administration in business and in government, as well as in colleges and universities. Therefore, this paper is best directed to certain of the practices that have been found successful in the nonacademic world which also have some application in the administration of institutions of higher education.

Defining objectives. In a period of rapid growth and scientific change such as we are experiencing today, businesses are concerned with their objectives. This is a subject which in well-managed enterprises is under continuous review. Analytical studies are made to answer questions such as: What kind of business do we want to be? What kinds of products should we make? What markets should we seek to serve? Should we diversify and, if so, into what lines?

The public has followed with interest the efforts of the automobile industry to determine whether there is a small car market and what kind of automobiles to manufacture to meet the requirements of the market. Some parts of the aircraft industry are in the process of seeking to determine what fields to get into in addition to the manufacture of aircraft. Petroleum producers and refiners have gotten into the chemical and plastics businesses in addition to oil and gasoline. Well-managed businesses are aware that the failure to review objectives and to redefine purpose and goals may cause them to miss opportuni-

ties, to overextend themselves, fall by the wayside, or make wasteful use of resources. Great efforts are made to define objectives as precisely as possible.

In higher education, it is to be hoped that individual institutions will do more to define objectives in terms that are more specific than the platitudes often found in college catalogues. Limited financial, human, and physical resources can be used more effectively if objectives are clear. In many institutions, there are opportunities to sharpen objectives in terms of degree programs to be offered; the comparative roles of teaching and research; the determination of the constituency to be served; the determination of specific enrollment objectives; the determination of the kind of faculty which will be required for the planned future; and the establishment of priorities which will be consistent with available resources.

The need for planning. Detailed plans are required to translate objectives into actual programs. Decisions made in the present should be in accordance with objectives desired for the future. Nothing is more important to a business than its future, and well-managed enterprises regularly spend considerable funds and devote staff time to future planning. It is equally important for colleges and universities to engage in long-range planning for the purpose of determining specific enrollment goals; developing the kind of faculty required; determining the need for physical plant; and projecting the requirements for finances. These long-range plans should produce specific and detailed requirements for capital and operating expenditures.

Projections made on a five-year or ten-year basis should be reviewed annually and new projections made in the light of the previous year's experience and in terms of changed conditions. This kind of planning is impossible without the factual data upon which to base projections. Much in higher education that is called planning is of the ivory tower variety, in which committees prepare statements that sometimes are no better than a compromise of the respective views of individual members and have little basis in supporting factual data. Although the future cannot be anticipated precisely, forward-looking plans are vital because fewer mistakes will be made if current operating decisions are made with a sense of purpose derived from planning efforts.

Sound budgeting and programming. Government agencies and businesses find that one of the best opportunities for planning and programming arises in connection with the preparation of long-term and annual budgets. Programs, whether they deal with people, facilities, or services, are expressed in terms of dollars. If plans are made in sufficient detail, say for a five-year period, the preparation of the annual budget provides an opportunity to reproject and make revisions in future plans by using the actual experience factors of the year just concluded.

In an effort to force greater attention on plans, programs, and costs, many businesses not only prepare an annual budget, but they rebudget again during the course of the fiscal year. Some prepare an annual budget and then halfway through the fiscal year reproject and prepare a new budget for a twelve-month period in the light of experience during the first half of the current fiscal year. This device leads to sounder planning, provides better control over expenditures, and forces persons with administrative responsibilities to become cost conscious. Some institutions of higher education also follow this practice.

It is significant that in recent years the better-managed colleges and universities have improved their budgeting techniques tremendously. In many institutions, budgets are no longer prepared in a vacuum, nor are they an academic exercise. However, sound budget techniques are in need of continuous study and development. There is a particular need for development of supporting data and measurements that are meaningful in the field of higher education.

The need for supporting data. For plans and budgets to be sound they should be based upon factual data derived from actual operations and related to the standards of performance which are desired. This requires the development of workload data and of unit costs which can be used to build up and support estimates of expenditures of funds. For many years, well-managed businesses have accumulated data of this kind. The search for meaningful data and the analysis of such data are seemingly a never-ending process. The development of electronic computers is opening the door both to the collection and refinement of data to be used in programming, budgeting, and as a basis for management decisions.

Useful information of this kind may range all the way from the pounds of laundry produced per employee in a university hospital and the cost to process each pound of laundry, to the raw food cost per meal served in residence halls, to the cost per passenger mile to operate a motor pool, to the staffing requirements to clean and maintain 300,000 square feet of classroom space, to the cost per student credit hour in any department of instruction at both the graduate and undergraduate levels. Information of this kind, when accurately developed and intelligently used, can be of immense assistance in making meaningful projections for planning and budgetary purposes.

Expenditure controls. It is difficult to allocate limited resources effectively if it is not known where expenditures are incurred and why they are incurred. It is easier to identify the *where* than the *why*. However, the presence of practices of the kinds referred to above which produce workload data and unit cost information facilitates the job of identifying the components of expenditure items. In business, the profit motive and competition are powerful forces making for watchfulness and diligence in understanding and analyzing costs and in controlling expenditures. In higher education, it may be that increasing demands for services, inflation, and the competition for dollars will be equally compelling factors in bringing about better control of expenditures.

It is less difficult to develop meaningful and acceptable workload and unit cost data in a university where the supporting services are concerned than in the instructional side of annual expenditures. However, the time has come for better planning and budgeting of expenditures for instructional purposes. The problem and the need should be explained to the administrators of academic programs and to faculties, and their cooperation should be sought in the interests of developing objective data which may be reasonably applied in reaching decisions regarding programs. Experience has shown that funds can be found through better instructional programming and used for other academic purposes.

The need for personnel. There is no area of management with which a well-run business today is more concerned than the development of talent to meet the responsibilities of running the business in the future. Our universities have graduate programs and professional schools to provide specialized training for

the future managers of business enterprises. Also, businesses themselves develop executive talent through on-the-job training and in special training programs. There is careful selection and tutelage of those who, it is hoped, will develop into the managers of the future.

Administration in higher education provides a strange contrast to these practices. Although the scope of higher education as an enterprise is large in whatever terms are used to measure it, little is done to develop managers to meet the responsibilities of administering this enterprise. Much can be done to upgrade administration in higher education. There is no other organized human endeavor of this scope or importance where previous experience, training, or demonstrated competence are not necessarily requirements for appointment to positions of leadership and managerial importance. If an appointment turns out to be brilliant and successful it is often the result of accident and not design.

There should be planned programs to develop persons who can assume top positions of responsibility in the administration of instruction, research, finance, business, and over-all planning. Even smaller institutions have a need for competence in these fields. Studies of dozens of colleges and universities have shown that there is a lack of qualified administrators and that there are more staff and operating jobs to be filled than there are trained persons to fill them. The needs will grow rather than diminish.

A planned approach to the development of personnel involves, among other things, a description of the positions to be filled, a definition of the desired qualifications of an incumbent, the determination of those positions of lesser importance which provide preparation for the top positions, the selection of personnel in the appropriate age categories who have the necessary aptitudes to serve in administrative positions, and top support for the execution of a program of planned development. The rather casual practices too often followed in making appointments to important posts must be replaced by an orderly process if the general level of management is to be significantly improved.

NOTE: Chairman of this group was ROBERT L. MILLS, President, Georgetown College; the recorder was HAROLD P. RODES, President, General Motors Institute.

Systematic Financial Analysis and Budgetary Planning as Aids in the Attainment of College and University Purposes

CLARENCE SCHEPS

Vice President and Comptroller
Tulane University

SIXTY YEARS AGO, at the turn of the century, there were 238,000 students registered in American institutions of higher learning. Today, there are 3,600,000. In 1900, four per cent of the high school graduates went to college. In 1960, this proportion is thirty-seven per cent and is increasing each year. By 1970, enrollments will at least double, demanding large increases in teachers, facilities, and operating funds. Compounding the effect of enrollment increases are other compelling demands faced by higher education on all sides. The growing complexity of the scientific, economic, and social aspects of society increases the urgency for the production of highly trained college graduates, possessing greater information, better skills, and deeper understanding than ever before in history. The demands of our times and of our government for research and development programs tax our institutional resources, both human and physical, almost to the breaking point.

In order to support present demands, the colleges of the nation now spend about $4.75 billion annually for operating needs and nearly a billion a year for capital outlay. By the end of the decade, ten years hence, operating budgets should be about $12 billion, or nearly three times what is now being expended. In addition, between now and 1970, $15 billion to $18 billion should be spent on physical facilities.

The basic solution to the problems just outlined rests on the ability of higher education to obtain substantially increased financial support from society. But this in itself is not enough. It is imperative that we in our own institutions, and collectively on a national basis, put our financial and administrative houses in order, so as to ensure that the resources with which we are provided are used as economically and as efficiently as possible. Institutions of higher learning are obligated to improve their techniques and practices of analysis, budgeting,

accounting, short- and long-range planning, and, in general, the management of their financial and human resources.

In studying ways and means of making higher education more efficient, we must be on guard always against any proposals which would result in the cheapening of our educational product or which would reduce the quality of our educational institutions. The transcending need is to make our higher education better than it has ever been before. The need for quality in higher education has become almost a matter of national survival, and nothing must be done which would impair the ability of the colleges and universities to produce quality-trained graduates. Moreover, as we study ways of increasing efficiency, it must be kept in mind that the institution of higher learning is not like a manufacturing establishment or a department store whose efficiency can be judged almost entirely from a profit and loss statement or by a unit cost study.

What is meant by systematic financial analysis and in what areas may such analysis be useful? In simple terms, systematic financial analysis refers to an orderly, planned set of procedures and techniques for obtaining financial information in ways that will assist institutional management in reaching sound conclusions and in making intelligent decisions regarding the operations of the institution. Systematic analysis makes use of any logical classification or rearrangement of financial data in order to reveal more clearly the facts about institutional operations. As the name implies, the analysis is planned or systematic and should be continuous from year to year.

Analysis frequently may involve unit cost studies, but this is not necessarily the case. Analysis translates gross expenditure data, taken from financial records, into terms by which comparisons are readily available. These comparisons may be between departments within the same institution, between different functions or objects within the same institution, or, under carefully controlled conditions, they may involve interinstitutional comparisons.

Analysis is not an exact science nor can it be depended upon by itself to solve financial or administrative problems. Likewise, it cannot be relied upon as the sole basis for administrative action. Rather, it is an important point of departure in assisting administrators and the faculty in managing the educational affairs of the institution. Depending upon the area being studied, financial analysis may involve a comparison against normative data developed from the operations of comparable institutions. However, because of the great diversity among educational institutions, and the need for subjective interpretation of all data, the development of norms has not progressed to a point where this kind of comparison usually can be made without substantial qualification.

Systematic financial analysis can be useful in studying each of the functions of institutional operations. These would include the expenditures pertaining to general administration and general expense, instruction and departmental research, organized activities relating to educational departments, organized research, extension and public services, libraries, physical plant, auxiliary enterprises, and student aid. Systematic analysis of costs in each of the foregoing areas can be useful in internal management and in budgetary planning. For example, it may be profitable for an institution to chart the proportion of its educational dollar going into general administration and general expense as compared to expenditures for instruction. This is of particular interest when plotted

over a period of years. Maintenance expenditures are subject to many kinds of analysis and frequently a given maintenance function of one institution may be evaluated in terms of a similar function at a comparable institution. The operations of auxiliary enterprises can be compared to operations of comparable business activities. For example, there is very little difference between a commercial cafeteria and a college cafeteria with respect to food, labor, and expense ratios.

It is in the area of instruction, however, that by far the least research, study, and systematic analysis takes place, despite the fact that it is in this area in which there exists the greatest need. National figures indicate that expenditures for instruction and organized research comprise between fifty to sixty per cent of total educational and general expenditures. Yet, in this function to which most of the educational dollar is directed, there has taken place the least systematic financial study and over-all planning.

There are several reasons for this failure to subject instructional expenditures to more aggressive analysis. In the first place, there is great complexity in the factors which go into instruction. For example, no unit has ever been developed which can measure quality in an educational institution and, admittedly, all data produced from analysis of instructional costs have to be subjected to critical interpretation. Secondly, and more significantly, there exists the fear on the part of college and university administrators that faculties will resent studies of this nature and may consider them as an invasion of academic rights and privileges.

I have serious doubts of the validity of either of the foregoing points of view, especially the latter. I am convinced that administrators must initiate such studies of instructional costs and that, moreover, faculties generally will be willing to cooperate in providing information and in making intelligent use of the results produced by such studies. The failure on the part of administration vigorously and imaginatively to subject the academic and instructional function to intelligent scrutiny has contributed to the notions publicly advanced by the late Beardsley Ruml, and others, that the faculty cannot be depended upon to control curriculum and that such responsibility should be removed from their hands. This indictment of the faculty, I am convinced, must be shared by those administrators who have failed to live up to their own responsibilities for proper institutional administration.

In analyzing instructional costs, there are a number of studies which may be of value in internal administration and budgetary planning. The following outline is illustrative of the kinds of studies that may take place in the area of instruction:

1. Studies of instructional costs, by major objects of expenditures such as faculty salaries, instructional supplies and expenses, equipment, clerical salaries, staff benefits, instructional administration—on a percentage basis and on a per student basis.

2. Studies of faculty salaries: a) average, median, and range of salaries by ranks; and b) number and percentage of faculty by ranks.

3. Studies of teaching loads: a) analysis of faculty time devoted to instruction, research, community activities, other duties; b) number of credit hours taught per full-time faculty member; c) number of class hours taught per full-time faculty member; d) number of student credit hours taught per full-time faculty member; e) average instructional salary expenditure per student credit

hours produced; and f) average instructional salary expenditure per student credit hour of classes taught.

4. Studies of the efficiency of the instructional program: a) extent of different courses taught, in credit hours; b) semester hours of classes taught; c) student credit hours produced; d) per cent of credit hours in small classes; and e) average size of classes taught.

5. Studies of the efficiency of teaching resources: analysis of utilization of classrooms and laboratories.

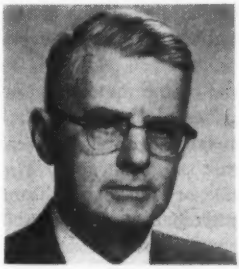
The analysis of instruction can be based on departments within the institution, or on the institution as a whole. Studies may be conducted also on the basis of course levels, that is, freshman-sophomore, junior-senior, graduate-professional.

Systematic costs analysis is more useful in internal administration than it is in interinstitutional comparisons. The diversity among educational institutions is so great that gross comparisons between institutions are of little value and can result in dangerous and misleading conclusions. Members of legislative bodies, boards of trustees, and philanthropists can easily reach erroneous conclusions through hasty and incomplete comparisons between two different kinds of institutions. On the other hand, there have been several projects in recent years which point up the value of properly organized and controlled interinstitutional comparisons.

It is quite evident that our institutions of higher learning are going to have difficult financial problems in the years ahead. Most institutions have already reached this point. It is equally evident that higher education is going to have to utilize its faculties, facilities, and students with the utmost efficiency consistent with the peculiar nature of the educational institution. Every facet of institutional operation is going to have to be subjected to continuous and systematic financial analysis and investigation.

NOTE: Chairman of this group was GEORGE F. BAUGHMAN, Vice President and Treasurer, New York University; the recorder was HAROLD W. HERMAN, Editor, *College and University Business.*

Establishing and Maintaining Cooperative Programs Between Institutions of Higher Education



BLAIR STEWART

President
Associated Colleges of the Midwest

WE WILL FOCUS HERE on situations in which colleges and universities work together in organizations with institutional membership to achieve common ends. There are great advantages in the joint analysis of common problems and the formulation of procedures which contribute to their solution, particularly when the procedures involve efforts to influence the general public and state and national legislatures. Illustrations are the extensive activities of the American Council on Education on the national scale, and cooperation in the submission of their combined budgets to the legislature by the state universities in Ohio.

The major advantages of such cooperation are that it is possible to engage staff and make other expenditures that the individual institution could not well afford, that many minds can be directed to the analysis of problems and the formulations of policies, and that the group as a whole can wield an influence greater than the sum of the impacts that could be made by the members operating separately.

Cooperation of this type involves some disadvantages. Some institutions may be in the position to gain at the expense of others by separate action. Others may infer that membership relieves them of the necessity for individual exertions. Finally, the process of agreeing on common objectives may involve so many compromises that the policy advocated may be of little value to any institution.

We may pass lightly over the athletic conference as a form of interinstitutional cooperation. It facilitates greatly the formulation of schedules of events, and it attempts to equalize the degree of professionalism involved in the athletic activities of the members. Another way of putting this is to say that the athletic conference is an attempt to control activities that might contribute to undue competitive inequalities.

Somewhat similar objectives can be discerned in the activities of accrediting agencies. Improving the quality of American higher education, providing the public with opportunities for more informed judgments, and promoting proper

labeling, are all appropriate activities of these associations, but a basic ingredient is the effort to prevent unfair competition.

One form of interinstitutional cooperation that has developed with amazing rapidity is the state-wide foundation of independent colleges, organized primarily to make joint appeals to prospective business donors for financial support. Here the chief ingredients are the greater effectiveness of group pressure and release of the donor from the necessity of making invidious distinctions. There are now at least forty of these foundations and they are to be found in every habitat that gives any prospect of sustaining life.

The joint use of expensive research installations is one of the important and growing areas of interinstitutional cooperation. The activities of Associated Universities, Incorporated, at Brookhaven, and of the Associated Midwest Universities at Argonne, are but two illustrations of many that could be cited. The advantages here of access to research facilities that no one of them could afford separately is quite apparent. No less important is the interchange of ideas and information in research that is facilitated by such cooperation.

A related situation is one in which cooperation permits a degree of specialization among institutions. A case in point is the arrangement by which a student at Amherst, Mount Holyoke, Smith, or the University of Massachusetts is permitted to take a course in any of the other institutions if the course is not available in his or her own college. The result is that the students in any one of these colleges have available a range of course opportunities that the single institution could not provide.

Another illustration of joint use of expensive resources is the cooperative use of library facilities at the Claremont colleges. Cooperation in the library field goes on in many ways—many of which do not involve interinstitutional cooperation as such. The mounting costs of acquisitions and the swelling flood of scholarly publications suggest that this is an area in which new procedures are becoming constantly more urgent. It is quite possible that some of the most productive of these will involve greater cooperation among college and university libraries.

Sometimes a desirable program cannot be adequately staffed by a single institution. A combination of this feature and the fuller utilization of expensive facilities is illustrated by the Association of Universities for Research in Astronomy, which includes the Universities of California, Chicago, Indiana, Michigan, Wisconsin, Harvard, and Yale. It was formed to construct and operate the National Astronomical Observatory in Arizona. A similar activity in the field of high energy physics is carried on by Midwest Universities Research Association, which is made up of fifteen Midwestern universities.

The Argonne Semester Program of the Associated Colleges of the Midwest may also be classified as a project in which several colleges combine to provide adequate staffing, both of faculty members and students. Under this program three faculty members, a biologist, a chemist, and a physicist, spend two summers and an academic year at the Argonne National Laboratory, and each semester a group of ten students in the same fields is engaged in research and study at Argonne. No single liberal arts college could keep such a program adequately staffed with faculty and outstanding students. Ten cooperating colleges can readily supply the necessary participants.

Elimination of wasteful duplication of facilities and efforts can be achieved by interinstitutional cooperation. This is surely part of the advantage gained by the establishment of the Midwest Inter-Library Center. It is also a prominent feature in the Coordinated Extension System for the State of Michigan, in which extension and field service activities of nine tax-supported institutions are coordinated.

It is generally recognized that large-scale purchasing can be advantageous, not only because of the enhanced bargaining power and possibilities for round lot discounts, but because it justifies more adequate investigation of alternative sources of supply and of product quality. It may not be immediately recognized that joint purchasing of *services* can also be more efficient. This is, however, one way to characterize the visiting scholars program of the University Center in Virginia and the consulting services in business management and food service provided by the Associated Colleges of Illinois.

Another case of joint purchase of services is the insurance program of the Associated Colleges of the Midwest. Under this program a firm of independent insurance advisers was engaged to review the insurance coverages of the member colleges, make recommendations and prepare specifications for combined purchase of insurance. The result has been an improvement in insurance coverage at reduced cost at a very low per-college outlay for the consulting service. One outcome of this program has been the filing, in the four states in which these colleges are located, of a new form of institutional fire and extended coverage insurance available to all nonprofit institutions. This new form provides better coverage at lower rates than any insurance the filing companies had been previously writing.

Cooperation can be a most effective means of instituting educational innovations. Like juvenile creek swimmers in the early spring, groups may take breathtaking plunges that none of them would contemplate alone. The New College proposals from the Connecticut Valley colleges could hardly have come from a single faculty and could only be contemplated as an entirely new institution. The Advanced Placement Program, which has made such rapid progress in recent years, had its origin in the School and College Study on Admission with Advanced Standing. This was a cooperative project of a number of colleges and secondary schools. The joining of efforts by institutions at two different levels was a vital feature in the development of this program. It suggests the possibility that other significant innovations could be achieved by cooperative ventures of this type.

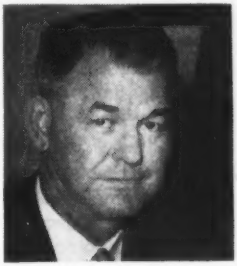
Cooperation in institutional research has a long history and, in my estimation, a brilliant future. The Eight Year Study and the Sixty College Study are household words in educational circles. The number of such studies is constantly increasing—and for excellent reasons. They make it possible to enlist research talent that the individual college could not afford; they eliminate wasteful duplication of effort; and they provide the comparative data which are essential to many investigations. One of the greatest frustrations experienced by the college administrator arises from the sense of futility with which he answers the many questionnaires he receives from independent investigators. So frequently these are inadequately planned, poorly designed, repetitive of other work, and inadequate in their coverage. Frequently these inadequacies are inseparable from the

isolation and independence with which the studies are pursued. In many cases the only solution is cooperative research.

A final illustration involves cooperation in the study of cooperation. This was the major initial effort of the Committee on Institutional Cooperation of the Council of Ten and the University of Chicago. An important first activity of this committee was to survey the interinstitutional cooperation under way or proposed in which one or more of the Big Ten universities and the University of Chicago were involved. The number and variety of cooperative activities listed have surprised everyone who has seen the report of the committee.

NOTE: Panelists for this group were HERBERT K. GATZKE, Director, Student Personnel Services, Claremont Graduate School; ROBERT H. KROEPSCH, Director, Western Interstate Commission for Higher Education; JAMES C. MESSERSMITH, Specialist for State and Regional Organization, Division of Higher Education, Office of Education, U.S. Department of Health, Education, and Welfare. Moderator for this group was EARL W. ANDERSON, Chairman, Department of Education, The Ohio State University; the recorder was HARRIET D. HUDSON, Dean of the College, Randolph-Macon Woman's College.

Intercollegiate Athletics and Higher Education



FRED C. COLE

President
Washington and Lee University

FORMAL AND ORGANIZED athletic competition is an established and venerable institution of Western civilization. The association of athletics with educational institutions also is old and is characteristic of British-American culture. Athletics, therefore, have a legitimate place in American colleges and universities; interest and participation in sports is both normal and desirable.

The objectives and standards of a university should, however, be determined by its educational mission; extracurricular interests should be governed in conformance with those objectives and standards. Furthermore, it should be obvious that the future of the world depends upon the effectiveness with which trained intelligence can be brought to bear upon the major problems of man and his universe. The adequacy of our education will be the deciding factor. The results of games will signify nothing.

The American system of higher education is healthily diversified. There are a number of different types of institutions which, though similar in many purposes and objectives, represent different emphases and specific functions. Generally, these are identified as independent, public, and church-affiliated institutions. Because of variations among institutions, there may be differences which must be taken into consideration in regard to athletic programs and problems. This is not to say that the athletic program should be allowed to influence educational policies in any kind of institution. It is recognized nevertheless that the particular functions and responsibilities of a college or university may affect its athletic as well as its educational activities, and that the effect in the two areas may sometimes be related.

An intercollegiate athletic program should benefit both the participants and the institutions which they represent. For individuals, the advantages and satisfactions of athletic competition might include the development of physique, character and personality, and emotional catharsis. The experience is represented as instilling self-reliance, as fostering simultaneously the desire to excel and a spirit of fair play, and as inculcating the ability to cooperate for mutual ends, even at the sacrifice of immediate self-aggrandizement.

If any of these claims are valid—and at least some of them are in most cases—athletics make a valuable contribution to the educational process. It follows, then, that colleges and universities should provide opportunities for as many students as possible to take part in organized sports. The number of participants will vary, of course, from one school to another, as will the number of intercollegiate sports. There appears to be no necessary correlation between the breadth of the program and the popular identification of the school with emphasis on athletics, or with the strength or type of competition which is normally faced.

Institutional benefits of intercollegiate athletics are usually conceived in vicarious or emphatic terms. Students and alumni identify themselves with the team, exult in its success, despair in its defeat. Interest in the team provides a unifying bond among students in different academic programs, and alumni in diverse occupations living in many places. It also serves as a continuing link between the alumni and their alma mater. This association is wholesome as long as it remains subordinate to and apart from educational considerations, which should always be the chief source of student and alumni pride and affection. There is no evident connection whatever between touchdowns or goals and the quality of teaching in academic classrooms.

Many others besides students and alumni are interested in college sports, and a college or university should provide the spectator accommodations which it reasonably can for persons genuinely interested in its athletic teams and in those of its usual opponents. It is not obligated to conduct entertainment or spectacles with no educational value for the benefit of the general public.

As the objective in any competition is to win or to excel, it is recognized that value must be placed upon victory. But if athletics are to continue as a wholesome influence, victory should never be the overriding consideration in college athletics. It is assumed that words so often used by coaches and others interested in sports—character building, sportsmanship, team spirit, and others of similar import—represent true goals and not mere lip service. A winning athletic team may be a source of great satisfaction; but it is small compensation for loss of integrity by an individual or an institution.

Not more than half the teams which play on a given day can win. Where tie scores can occur, fewer than half will gain victory. If victory is the only gratification to be had, the total of disappointment will always be greater than the total of satisfaction. It would be foolish to support a system which is logically absurd and psychologically damaging. Sports should provide a healthy catharsis of emotions and not a pathological frustration. Victory has, of course, an economic aspect. Winning teams ordinarily draw more spectators than losing ones; and many institutions depend upon gate receipts for most of their athletic income. But it must be remembered that it serves no educational purpose to play winning contests in order to attract crowds large enough to finance winning contests. It is indeed a vicious cycle when this occurs.

There are pressures which are brought to bear on colleges and universities to engage in just this kind of cycle. Pressures vary in kind and intensity and come from various directions, but most seek some compromise of academic standards for anticipated athletic success. At this point in history, it is imperative that the most effective possible use be made of America's educational

resources. Any serious hindrance to this purpose may be disastrous, and even minor obstacles are dangerous. The best possible instruction must be given to the best possible students. Universities and colleges of high standards should make every effort to resist pressure upon themselves and to help other institutions to do so. Those seeking athletic pre-eminence are often a small but highly vocal minority, while those who favor educational excellence are a silent majority. Areas of opinion in favor of academic standards should be sought out and brought forth to at least balance if not subdue the athletic clamor.

The stated admission policy of an educational institution should apply to all applicants. Individual exceptions should be made only for the acceptance of obviously qualified students who may not meet all technical requirements. Certain geographic, religious, or alumni preferences may be permitted, but in such cases, minimum requirements should be uniformly applied. No admission policy should be designed to facilitate the enrollment of persons who wish to attend an institution primarily for purposes other than educational. Admissions pressures will continue to increase. Our civilization cannot afford to deny a superior education to a superior person in order that a boy with little or no scholastic ability may be allowed to play games.

In any institution of higher learning, every curriculum and course should fulfill a genuine educational purpose. Courses which foster good health and physical fitness are of benefit to the individual and society. They have a legitimate place in a college curriculum, but they should be offered as supplementary to the academic program and should never be substituted for courses of intellectual content.

Preparation of students for careers in athletic coaching should be offered in a college or university only if the faculty believes and freely decides that it meets a legitimate obligation of the institution and serves an educational need on the collegiate level. In the coming years, the techniques of coaching and of directing recreation can hardly be given high priority. The need for people with the proper skills in these areas is not challenged; but the question may be raised whether the training should be undertaken in college classes or through other agencies and systems.

Colleges and universities should award financial aid to students on the basis of scholastic aptitude and need. Scholastic aptitude, on a competitive basis, should determine the fact of eligibility for assistance. Actual need should determine the amount. Athletic ability should be considered only insofar as it may indicate physical health and emotional stability contributing to the likelihood of academic success.

Many institutions do offer grants-in-aid to students based primarily on the athletic prowess of the individuals. Pressures which were suggested earlier may prevent any abrupt discontinuance of this policy, but even for these institutions there are certain principles which should be observed. Assistance should be limited to the actual expenses of attending college. The amount of aid to an athlete should be based on financial need. If a student is able to pay his own way to college and then accepts an athletic grant, this amounts to outright compensation for service rendered and constitutes professionalism.

Many will argue that athletic grants should be condoned because they offer the only means by which many young men (and women) can avail themselves

of a college education. In the future, this contention will become increasingly less valid. Regardless of the source of fee payments, athletes occupy dormitory rooms and classroom seats, and they demand the attention of faculty members, just as any other enrolled students do. We must instruct our academically qualified young people whether they are all-American halfbacks or whether they can walk only with crutches.

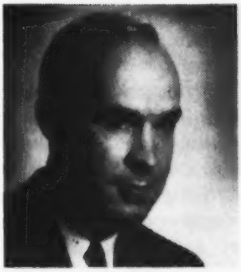
Once in college, all students in any academic program should meet the same requirements for remaining enrolled, progressing through the grade levels, and receiving a degree. Any privileges should likewise apply equally and universally. Any student engaging or expecting to engage in intercollegiate athletics should meet all the requirements for full-time enrollment and progression. When a student is admitted to a college or university, the institution by this action admits a certain responsibility to that student; namely, to provide the opportunity for a proper education in a regular curriculum leading to a degree. If a student is allowed to wallow through an easy succession of vacuous courses which serve no purpose except to keep him eligible for sports competition, then the institution is not meeting this responsibility.

If the academic standards and integrity of an educational institution are to be maintained in regard to athletics, the athletic policies and practices of the institution must be subject to academic authority. The faculty should have full authority for prescribing all curricula, methods, and criteria for instruction, and rules of eligibilty for participation in athletics. The athletic director, or similar officer, should be responsible to a principal administrative officer of the institution, on the same basis as any other subordinate administrative officer, and subject to the same policy regarding appointment and removal. The budget of the athletic department should be subject to the approval and audit of the chief fiscal officer of the institution. Any standing executive or advisory committee which functions in the field of athletics should be appointed in the same way and by the same authority as similar committees in other areas of administration, and its members should serve as individuals rather than as representatives of any groups or interests. No organization of students, alumni, or other persons, within or without the institution, should have any more to say about athletic policy and procedure than it has in regard to academic policies, excluding, of course, athletic conference organizations and the National Collegiate Athletic Association.

The proper relationship of intercollegiate sports to the general framework of higher education is a problem, varying in its scope and intensity from one institution to another. But it is not a problem without a solution or solutions.

NOTE: Chairman of this group was EDWARD K. GRAHAM, Vice Chancellor for Academic Affairs, University of Denver; the recorder was JOHN B. FULLEN, Alumni Director, The Ohio State University; the resource person was JOHN P. KEEGAN, President, Associated Students, University of Notre Dame.

Ways in Which American Higher Education Can Better Inform the Public of Its Goals, Values, Needs, and Opportunities



KENNETH M. CUTHBERTSON

Vice President for Finance
Stanford University

IN ORDER TO INFORM THE PUBLIC of their goals, values, needs, and opportunities, institutions of higher education obviously must know and define their own goals, values, needs, and opportunities. Have we really done this? Probably each of our schools embraced a great statement of purpose at the time of its founding, and these statements undoubtedly stirred public support and applause. They may bear repeating, and they undoubtedly will continue to provide inspiration. But what the public needs now is a statement for now—a statement from each institution and from each segment of higher education as to where it's going in the light of today's world, a world which seems to threaten the goals of our free society.

After several years' exposure to informational programs in higher education, I am convinced that we need to spend less effort saying how good we are and much greater effort in saying how much better we wish to be. Too often, concern for the very real problem of rising student population has implied that our primary objective is the same education for greater numbers. Similarly, many who are concerned with the problem of financing higher education for this greater population in the future are led to search for economies which will provide the same education at a lower unit cost. I am afraid that public concern for numbers and economies has led us to center too much of our informing activities on these subjects. Our big job is to inform the public that higher education must improve, that the "same education" is not good enough. And since I believe a better education will cost substantially more, it looks like quite a selling job ahead of us.

We should be encouraged by some recent signs of help in this effort. In last year's *Report of the President's Commission on National Goals*, John Gardner writes forcefully: "We must raise standards in every phase of our

national life. Education is no exception. We must do a better job. And the concern for educational quality must be widely shared." In its summary, the report recognizes that "a higher proportion of the gross national product must be devoted to educational purposes." In Professor Seymour Harris' recent reports on conferences and studies relating to the economic problems of higher education, one is reassured by a recognition that quality is more important than economy. In a review of experiments in higher education, Professor Harris reports in summary that "outstanding liberal arts colleges are asking the question: how can we realize the potential of our students?" And the answer lies in improving what already are considered excellent programs in such colleges.

In the summer of 1960, under the auspices of the Edgar Stern Family Fund, I had the privilege of visiting eighteen privately supported colleges and universities to compare notes on long-range financial planning. These schools were selected on the basis of a reputation for high quality in the various regions of the country. Discussions of long-range financial plans involved a discussion of institutional goals, needs, and opportunities. My overriding impression was that these outstanding schools, without exception, were concerned with how to further improve their programs. Whether or not they had formalized long-range plans, it was clear that each planned some new development or extension of existing program in order to achieve a greater degree of excellence. In all cases, these involved a greater investment in effort and expense per student. I am sure that visits to outstanding publicly supported colleges and universities would reveal the same concerns.

In spite of the evidence that colleges and universities wish to improve, most seem to lack a current definition of objectives to which the public can respond—what I referred to above as "a statement for now." A mere repetition of ideals recited in the founding grant will not suffice; the generalities concerning pursuit of excellence, however honest and worthy, will sound platitudinous. What the public is more likely to understand is a plan to accomplish specific objectives, and such a plan involves the very difficult task of establishing priorities. When it wrestles with the problem of priorities for effort and expenditures, a school is closely in touch with an examination of goals, values, needs, and opportunities.

Financial problems or financial needs have probably been responsible for some of the most effective communication of objectives of higher education to the public—at least a portion of the public. As more colleges and universities have gone to their publics for major gift support, I have been impressed with the lucidity of their statements of goals, values, needs, and opportunities. I am moved to suggest that one of the best ways for a privately supported institution to force a definition and then a communication of these objectives is to commit itself to a massive fund-raising effort! For the public institution, the same preparation and communication to its legislative or financing public should yield correspondingly successful results.

At Stanford, we have been involved in a comprehensive ten-year plan, and I think this is an excellent way to prepare for informing the public as to goals, values, needs, and opportunities. Certainly this effort has required a most extensive examination and definition of our objectives. By translating specific urgent objectives and priorities to cost projections over a ten-year period, we can see the magnitude of our financial needs. Similar projections of income

disclose gaps which must be closed by new resources. To sharpen the definition of our objectives, we prepared three ten-year plans: one showing an ideal (though unrealistic) increase in expenditure to improve our programs as rapidly as we could wisely spend unlimited resources; another showing a reasonable but slower rate of improvement; and a third showing a minimum course of improvement. Due in larger measure to the general support grant from the Ford Foundation and in the expectation that we can dramatically increase our gift support, we have lifted our sights from the minimum program and have undertaken pretty much the middle plan.

Our ten-year planning has forced us to wrestle with priorities, and we are thus better prepared to tell our public where we expect to go and why. The mere undertaking of a long-term plan caused us to define Stanford's particular opportunities to serve higher education. And the planning process itself caused a healthy assessment of the relative value and importance of enrollment changes, salary increases, staff expansion, library acquisitions, more student aid, plant improvements, and better maintenance. Although most annual budgeting procedures force such assessments, it has been our experience that a greater recognition and achievement of objectives can be accomplished by the longer-term plan. This is particularly true, perhaps, in an institution with a rapidly growing rate of expenditure. Of course, one must recognize the limitations of ten-year plans and be prepared for regular changes. We intend to revise ours annually; and we see increasingly that detailed planning is not too meaningful more than six years ahead.

No doubt the Ford Foundation's Special Program in Education is encouraging a good deal of long-range planning; the foundation's interest in Stanford's planning certainly intensified our efforts to define specific plans to accomplish objectives. And this exercise we find invaluable now that we prepare to step up our fund-raising efforts.

As more institutions prepare and expose long-range plans, more of the public will begin to understand what we mean by wanting to do a better job. Emotion can be replaced by facts, exhortations can be replaced by understandable programs, opportunities will be recognizable and needs justified. But the plans, representing a practical explanation of goals, values, needs, and opportunities, will require the best in communication techniques in order to capture the public's attention. I admit to being less concerned with this, for I believe that higher education has been improving communication techniques at a great rate.

As concerns actual communication, I have only two suggestions: first, that we be careful to define our public and recognize some priority among segments of the public; second, that we attempt to concentrate our informational efforts on describing opportunities rather than needs. It has been my experience that we communicate objectives best when we tailor our efforts to various segments and in some order of priority, such as: those in control, those in a position to help directly, students, prospective students, parents, alumni, the local community, and the public at large. Provided we do a good job with those high on the priority list, we will find they can do an even more effective job in turn.

As to opportunities versus needs, reflection tells us that the public must become excited about higher education, and it is difficult to become excited

about needs. Public preoccupation with the numbers and economy problems in higher education has resulted from our attention to exposing and trying to dramatize needs. Every good cause has needs. But what function of our American society has greater opportunities than higher education at this time? Who else has such opportunities to strengthen the individual, the search for truth, and the dedication to freedom? Can't these opportunities become exciting to the public?

NOTE: Chairman of this group was JAMES W. ARMSEY, Program Director, Special Program in Education, The Ford Foundation; the recorder was STUART E. MARSEE, President, El Camino College; the resource person was NEAL JOHNSTON, Editor, *Chicago Maroon*, The University of Chicago.

The Implications for Higher Education of the Growing Urbanization and Industrialization of American Society

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Harvard University

THE GROWING URBANIZATION and industrialization of American society has been in progress for many years, and those concerned with higher education have made these trends the subjects of their research and teaching in all their many aspects. The world-wide population explosion since the last World War and the accelerating movement of people into metropolitan areas have emphasized the need for fresh thinking and new attitudes. At the same time, the industrialization of agriculture and advancing automation in both productive enterprises and service activities are intensifying old problems which have been inadequately met in the past. The rising generation faces a very different and rapidly changing world with eagerness to understand and to influence the forces which mold American society.

The following questions point up some aspects of this subject: Since urban expansion and industrial location extend over many municipalities and across interstate and international lines, what changes in teaching of government and political science are needed to develop new procedures, organization, and leaders for the changing problems of our times? In an amorphous and extensive urban area, how can identification with the community, the sense of belonging, loyalties, and responsible attitudes be fostered? Are the forms of social organization inherited from a dominantly rural background applicable or adaptable to an urban-industrial age? The growth and decay of urban areas present problems of sprawl, renewal, housing, schools, transport and transit, pollution, open spaces, etc. How shall the next generation be informed on these matters and stimulated to new thinking and proposals to attack these problems? How are new facilities and additional services for growing cities to be paid for? What changes in ideals as to our way of life are involved in the shift from dominantly rural to an urban-industrial society?

The rush to the suburbs and to the fringes of metropolitan areas has resulted in urban sprawl—meaningless, patternless growth—with uprooted families moving into a new and often strange environment. Unlike the earlier settlements of colonial days or western expansion, the urban growth of today has no strong unifying influence for the new communities—no central church or meetinghouse, no railroad station or county courthouse to give identity to the community. New houses and subdivisions are strung along the older roads and highways without regard to parish, political, or any other jurisdictional lines.

Who then is responsible for bringing some order, some organization into the affairs of our growing urban areas? Our sprawling cities long ago spread beyond their municipal boundaries and beyond the control of any single city government. Most of our more important urban areas have overflowed into two or more counties, and many have crossed state lines. From Bangor, Maine, to Richmond, Virginia, a vast megalopolis is emerging; all of Southern California from San Diego to Santa Barbara seems to be falling under the sway of Los Angeles; in the Midwest, the industrial areas from Chicago to Detroit to Pittsburgh are growing more closely together. These intercity, intercounty, interstate urban areas, with all their physical, social, and economic problems, have no place in our traditional hierarchy of governments.

These expanding urban areas are covering much of the best agricultural land, invading scenic areas and historic sites, interfering with natural drainage, and occupying the flood plains. Urban values have become almost the sole consideration. We seem to have lost our sense of balance—and certainly have abandoned the philosophies of our earlier agricultural society. But what are these urban values? Do we know? Can we help the next generation to build new philosophies, new values to guide the growing urbanization and industrialization of American society?

On this score I have only a few suggestions to offer from my experience in planning. The planning profession is basically different from most professions—in fact many practitioners question whether it *is* a profession—in that planners are generalists and not specialists. My colleagues and I are concerned with relationships among the forces that affect our lives—physically, socially, and economically. To understand those forces, there must be deeper analysis, and we depend on the specialists in many fields for that analysis. But our primary concern is with synthesis on relationships, or on design. Somehow we must make two plus two equal five, to make the whole larger than the sum of the parts, or find that something which is added when unity is achieved.

In thus seeking for balance, harmony, flow, and form for our growing urban areas, we are only expressing for our field the ever-present human desire to find patterns, design, values, unity, and meaning in life itself.

NOTE: Panelists for this group were J. WHITNEY BUNTING, Consultant, Educational Relations and Research, General Electric Company; EMERSON HYNES, Associate Professor of Sociology, St. John's University, on leave as Legislative Assistant to Senator Eugene V. McCarthy; and EDWARD J. SPARLING, President, Roosevelt University. Moderator of this group was LEWIS E. HAHN, Dean of the Graduate School of Arts and Sciences, Washington University; the recorder was JULIAN H. LEVI, Executive Director, South East Chicago Commission.

The Future Goals of the Junior College

JAMES W. REYNOLDS

Professor of Higher Education
The University of Texas

LEADERS IN THE JUNIOR COLLEGE FIELD have been aware of their goals for over a quarter of a century. Moreover, a study of the educational program of many junior colleges will reveal that some have gone far toward attaining these goals. While the number of such institutions will constitute a small minority of all the junior colleges operating today, their success belies any claim that there is anything novel about these goals when considered from the standpoint of attainment. Since the goals, past, present, or future, for junior colleges are fairly well defined, and since some of the many junior colleges have made material progress toward attaining these goals, the question arises as to what profit can accrue from further discussion. The writer suggests as an answer to such a question that it is worthwhile to consider the following parts junior colleges with known goals should play in satisfying the educational needs of the nation.

Increasing student enrollments. It has become nauseatingly trite to speak to the "tidal wave of college students." In spite of the triteness, however, the large increases in enrollments in the past few years indicate that resources for serving college students have had to be, and will continue to have to be, increased. There seems little doubt that junior colleges will play one of if not the most prominent place in this matter of "absorbing" a large number of these students. It will not be enough, though, merely to absorb students. This function of providing a custodial role for youth may have been acceptable during the Depression, but with the critical situation facing the world today no time can be lost in providing for an educated citizenry.

In line with this thinking the need is rapidly emerging for an institution close to the grass roots to provide a desirable program for students who need not more than two years of formal college education, and to provide sufficient encouragement to students who should complete four or more years of college. Two pressures make the discharge of this function imperative. On the one hand, there is the need for serving the nation through providing college education for

as many as can profit from it; and on the other hand, the need for diminishing the unjustifiable pressures which large numbers of students create when they are enrolled in collegiate institutions which cannot serve them effectively.

The junior college needs to give more serious consideration to encouraging capable students to go ahead with their college work than has been given in the past. This means that steps must be taken to provide the means by which this encouragement cannot only be given but some "mild forms of compulsion" be exercised to bring about the desired result.

Many junior colleges have accomplished praiseworthy results in vocational programs for terminal students. While there is room for improvement, there is another aspect for programs of terminal students which needs attention. Many of the youth enrolled in junior colleges have no desire for vocational education nor for courses which will prepare them to transfer to four-year institutions. For this group a comprehensive program in general education is urgently needed.

Junior colleges in state systems of higher education. The local nature of junior colleges has resulted in a confused situation concerning the place of junior colleges in the systems of higher education in many states. On the other hand, there are many excellent examples in which the junior college has been fitted into the state system. There is a strong need for synchronization in all states in which junior colleges exist. An important feature of this step involves a clear definition of the contributions which the junior colleges will make to higher education.

Another aspect of this same procedure will be found in the necessity for involving junior college leadership in planning made by states for their higher education needs. It would be intolerable to expect the junior college to accept a role in a state system without having the opportunity to participate actively in the planning which must take place. Currently, there are a few states in which machinery exists for creating junior colleges in those geographical regions for which junior college service is not provided. This affords the possibility of an orderly development of the junior colleges in a given state.

In other states, however, state laws exist more or less as a means of preventing the creation of junior colleges in areas in which needs exist. In a sense, these states operate on a policy of daring anyone to overcome the barriers which must be surmounted in creating new junior colleges. If the development of junior colleges as a part of the state system of higher education is to proceed in a satisfactory manner, there must be a material shift from the negative to the positive point of view. When this shift is accomplished, there will be a better basis for the expansion of public junior colleges.

The role of the private junior college must also be taken into consideration in the development of state systems. Far too much emphasis has been accorded so far to the development of a junior college system which presupposes that private junior colleges are merely needless appendages which, while requiring no surgery, at the same time can serve no useful purpose.

Relation to high schools. Junior colleges have been forced to give a great deal of consideration to their relations with four-year colleges because of problems associated with successful transfer of students. Consideration of relations with high schools have therefore been slighted. There is evidence to indicate that

from the standpoint of curriculum, the educational program of the junior college carries a strong tie-in with that of the junior and senior years of high schools. In fact, in many respects the tie-in is much closer with these high school years than the last two years of the four-year college. It is for this reason that much more attention must be given to coordinating this four-year span than has been the case in the past.

One process for such coordination which has received far too little effort can be found in planning conferences involving faculty members from high schools and junior colleges. These planning conferences need to be conducted on the basis of the common problems faced by the teachers from each of the two levels and should avoid any semblance of teachers in junior colleges dictating programs for the high school.

Community service. The local nature of most junior colleges, whether public or private, is too well known to require further elaboration. Moreover, it follows logically that if a junior college serves a local clientele, its program can be classified as community service. Any serious study of community service, however, needs a more exclusive definition in order to be conducted satisfactorily. For this reason, community service is taken to mean those additional services provided by a junior college over and above the regular program offered during the regularly defined school day, on campus, and for full-time enrolled students. It is this concept of community service to which many junior colleges must give more active consideration. To effect maximum benefits to the community, this phase of the junior college program must be carefully planned. It cannot be left to chance as is apparently so often the case.

It is a truism to remark that American communities are faced with many serious problems due to their rapid growth. Certainly there is no institution in a better position to be fully informed concerning these problems and to provide a means for finding satisfactory solutions than the junior college. Much greater attention to this community service is needed.

Another phase of the community service program to which greater attention could be profitably given is that of helping adults overcome deficiencies in their formal education. Regardless of the justification for failing to complete a satisfactory program of formal education, there is no doubt that the contributions which these adults could make to community life could be materially enhanced if there were some program through which they could overcome these deficiencies. The junior college is in a position to provide such a program.

It must be recognized that certain factors exercise a negative effect in the development of a comprehensive community service program. These forces include limited finance, pressure groups, communities' narrowly defined concepts of what is proper for a "college" to offer, and sources of subsidy which exert inordinate pressure on certain types of academic programs. It would be unrealistic to ignore these forces. On the other hand, no satisfactory program of community service can be developed if these negative forces are regarded as insurmountable.

Recently I conducted a study of community service programs in junior colleges. One of the facts which this study brought out is that for the most part junior college community service programs reach the middle and upper social classes in the community far more than they do the lower social class. If it can

be accepted that people in the lower social class have the greatest need for educational service as a means of making their maximum contribution to community life, then material effort should be expended in planning programs which will reach these groups.

Student personnel. Apologists for the junior college have long proclaimed the importance of guidance and counseling as a top-priority function of junior colleges. Studies have revealed that there are too many junior colleges in which this function is receiving only lip service. Serious attention must be given to this function or else junior colleges should admit that they do not intend to make good on the claims which have been made. While the several aspects of the student personnel program are too well known to require further description, at the same time there are certain aspects of this program which are singled out at this time as being in very great need of further development. One of these concerns helping terminal and transfer students to obtain the greatest benefit from their junior college education.

Another aspect of student personnel services which is most often slighted is that of placement and follow-up. It is recognized that this service is very expensive both in money and staff resources. If it is to be accorded the importance it deserves, however, some means must be found to overcome the barriers that stand in the way.

One need which is manifest in junior college student personnel programs is that of more professionally prepared staff members. The nature of the work to be performed is far too technical to be handled by amateurs.

Basically, the important problem in regard to this aspect of the junior college education program is one of recognizing its significance. Other more obvious details of the program tend to monopolize the attention of the college administrators. It is unlikely that any material progress will be made toward remedying the existing deficiencies until the value system of the junior college leaders is expanded to include a recognition of this significance.

Conclusion. One final note of caution is needed. There is little doubt that the phenomenal growth of junior colleges in the United States has been related directly to their freedom from the restrictive influence of tradition. This freedom must be retained if the junior colleges are to continue to do the job they have done. There is no intention in this discussion of future goals to suggest that the future success of junior colleges depends upon trading freedom and autonomy for slavish conformity to patterns dictated either by leaders in the junior college field or by "interested spectators."

NOTE: Panelists for this group were ELLSWORTH R. BRIGGS, Dean, Hutchinson Junior College; C. C. COLVERT, Professor and Consultant in Junior College Education, The University of Texas; KENNETH FREEMAN, President, Christian College; THOMAS B. MERSON, Assistant Director for Commissions, American Association of Junior Colleges; CLYDE R. NAIL, Vice President and Dean, San Antonio College; WALTER E. SINDLINGER, Associate Professor of Education, Teachers College, Columbia University; and E. T. VINES, President, Fort Smith Junior College. The moderator was LELAND L. MEDSKER, Professor of Education, and Vice Chairman, Center for the Study of Higher Education, University of California at Berkeley; the recorder was OSCAR H. EDINGER, JR., President, Mount San Antonio College.

The Future Role of the Church-Related College

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AMERICAN HIGHER EDUCATION is facing a serious crisis. Some experts predict that by 1970 eighty per cent of our private colleges shall have collapsed financially unless new means of support are found. Would this be bad for America? Why have private colleges? Why have church-related colleges? These are fundamental questions. They need to be answered. The answers given to these questions must, in the national interest, lead to action. Although there is a diversity of answers that could be given to these questions, I shall attempt to frame my answer in terms of freedom in the pursuit of truth and the preservation of values essential to democracy.

I do not think that we can profitably discuss the future of the church-related college without reference to the question of freedom in our society. As a matter of fact, I think that the question of freedom is central to the question of the place of the church-related college in our American democracy.

In an area of the growth and extension of governmental power, we need to give more attention to the preservation of diversity in education which is an indispensable condition of academic freedom. Freedom implies the existence of choice. If a student is to enjoy the freedom to pursue his education in a college that teaches theology, such colleges must be in existence. If they are not, he has no freedom to choose a college with a positive religious orientation; he is compelled to attend a school which has no such religious orientation. Hence, when we discuss the future of the church-related college, we are in fact discussing freedom in the pursuit of truth and respect for the intellectual integrity of the person.

It seems to me that the nature of our pluralistic society and the imposed limitations of our state institutions necessitate the existence of church-related colleges as a condition of freedom of mind and freedom of religion in the pursuit of truth. If a student is to have the freedom systematically to orient particular truths to the ultimate truth consistent with his own religious convictions—and this is man's most lofty freedom—he must have the opportunity to attend a church-related college.

In a free society the student must be free *not* to attend a college which he thinks will undermine the vital postulates of his own religion. He must have the freedom to attend a college that respects his own religious convictions. To compel a student to attend an institution of higher education that undermines his religious beliefs is to violate his freedom of mind and freedom of religion and to do violence to the integrity of his human personality.

In his book, *God in Education,* Henry P. Van Dusen, president of Union Theological Seminary, quotes a very perceptive student who seems to have had such an experience. The student recalls the lessons his professors drove home to him: "Morals are relative to the time and place," "what is good in one society is bad in another," "religions are the product of myth and superstition," man is "one species of mammal," and "free will is at odds with the basic assumption of modern science—determinism." The student thereupon poses several questions which, I think, have direct implications for his intellectual and spiritual welfare and for society's welfare. "If men are but animals, why not treat them as such? If a man is a slave to determinism, incapable of free choice, what is the value of the ballot, trial by jury, and civil liberties in general? Personally," says the student, "I fail to understand how you can expect us to become ardent Christians and democrats when the vital postulates on which these faiths are supposed to rest are daily undermined in the classroom."

It seems to me that every American college student must be free to attend a college which accepts and teaches, in the words of this college graduate, "traditional Christianity and democracy, eternal principles of right and wrong, the existence of the human soul, a personal God and life after death."

If a student believes in the reality of God, and if he believes that religion is the determinative principle in the educational process as a whole, he should have the freedom to attend a church-related college. He should have the freedom to attend a college that operates on the principle that religion, as Henry Van Dusen said, "affects vitally and decisively the over-all philosophy and content of the curriculum and of its every part, reflecting religion's basic premise that God is ultimate Ground of Truth in relation to which every segment of knowledge and all particular truths must be oriented."

Hence, if the student is to have the opportunity to relate all particular truths to ultimate truth, he must have the freedom and the opportunity to study at a church-related college in which religion is the keystone of the educational arch. I am, of course, speaking of academic institutions whose central specification, whose primary distinctive character, lies, as it does in other institutions of higher education, in their ordination to knowledge and truth. Religious doctrine, as Cardinal Newman insisted, "is knowledge in as full a sense as Newton's doctrine is knowledge."

To come to my second point. If our nation is to have a citizenry committed to the moral principles that constitute the vital postulates of our democratic society, we must have educational institutions that teach the theological presuppositions or truths upon which our moral principles rest. It seems to me that it is only if the student learns to refer all particular truths to God that he will grasp the moral and religious postulates that underlie the fundamental principles of our democracy. As religion is necessary for the personal life of the individual, it is necessary for a democratic society that is rooted in the

dignity and worth of the human person. Moral values cannot be dissociated from religion. And moral principles are essential to our democratic society.

These moral values cannot be divorced from religion and survive. The reason for this, said Bernard Iddings Bell, late Episcopalian clergyman and educator, in his book *Crisis in Education*, is that "neither the Jewish nor the Christian morality is a natural morality; both recognize supernatural demands and rest on supermundane sanctions." Hence, said Mr. Bell, "if conduct is not based on search for an Absolute of some kind and on service of that Absolute, morality becomes first a matter of fluid expediency and then a blind obedience to the merely strong." And the merely strong inevitably becomes the absolute state.

In recognition of the importance of religion to our democracy, the Founding Fathers of our nation, in allocating money for education, declared in the Northwest Ordinance: "Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged." Taking cognizance of the indispensable role of religion in our political society, the United States Supreme Court declared in the *Zorach* case of 1952: "We are religious people whose institutions presuppose a Supreme Being."

To give students the freedom to orient particular truths to ultimate truth consistent with their own religious convictions, to give them the opportunity to learn the moral and religious principles that are essential for the preservation of our democratic institutions—these and other functions of our church-related colleges not only justify their existence but, it seems to me, make them virtually indispensable to our society.

The important public service of public education, together with their unique contribution to our free and open society, would seem to indicate that church-related institutions of higher education merit the most dedicated support of their alumni and of society as a whole. Consequently, when all potential sources of financial assistance have been exhausted—higher tuition, gifts from alumni, friends, and corporations, and grants from foundations—it would seem that such institutions have a right to expect that government will enable their students to pay a higher part of the full cost of their education through direct tuition grants to students or a tax credit against tuition and fees.

There is a financial limit beyond which church-related and other private colleges cannot, through low-cost education, continue to subsidize not only their students but also American society, the beneficiary of an educated citizenry. When a college goes beyond this limit, it suffers financial collapse. In view of the significant role which church-related colleges play in American higher education, such financial collapse is, I take it, totally unacceptable to all who are dedicated to academic freedom in the pursuit of truth and to the preservation of the values essential to democracy.

JOHN D. MOSELY

President
Austin College

IT IS NOT NECESSARY to relate the past contributions of the church-related college or the leadership of the church in the field of education during the formative years of this country. The foundation, the cultural endowments, the undergirding of the church have to a large extent brought higher education to its present development. Although the basic reason for church involvement in higher education may be the same as formerly, the situation in which the church college now operates is radically different, demanding a new strategy and emphasis, if not a new role. And change is suspect to both church and college who often see in it heresy or a threatened departure from basic purpose.

If we analyze American higher education, we find values and facets of the system specifically rooted in the heritage of Christian higher education. Granted that some are not the exclusive flower of the church college, can they survive and flourish without its continuing contribution? The entire system, public and private, will be the poorer if stress and strain succeed in denuding education of these values.

The church college is no stereotype, in spite of many common concerns and emphases. The term Christian college embraces both Protestant and Roman Catholic, yet between these there are differences in educational philosophy, and the remarks here are primarily for the former group. Neither is there, quite realistically, a single church college able to attain all the standards desired. But from a nucleus of such colleges can come an important thrust in the American higher education system.

Here, then, are some possible important contributions of the church college: First, the educational approach represents one of freedom in the pursuit of truth, one of the relatedness of that truth to the whole of life, one ready to face new discovery and to re-examine its own approach and philosophy in light of these new ideas. It recognizes that in addition to tests and measurements, to proofs and logic—there lie dimensions of the spirit and values that give meaning even to this pragmatism and objectivity. This is not to say there is a narrow, single educational philosophy for all church colleges; within this broader approach there is obviously a diversity of emphases, but their combined force speaks out in the educational market place, offering a live option in the midst

of the total picture. And the very existence of such an option serves as a corrective and stimulus to all education.

Second, a group of colleges dedicated to such an educational task serves as a safety valve of freedom in the dual system of higher education. The diversity of control and the commitment to educational freedom surely provide a valuable insurance against political domination of the system. The other side of the coin, of course, is that public institutions would likewise check any undue theological control by the church which might, if unreasonably severe, produce bad education.

Third, because it is usually small, its procedures and controls correspondingly less complicated, the church college can be flexible and experimental. Here pioneering can still take place, and the results shared with other institutions. Here new programs and techniques can perhaps more easily be put into effect, and the successful efforts expanded and further developed.

Fourth, our interpretation of the separation of church and state in the field of education has largely deprived public education of an entire intellectual discipline. It could surely be argued that no true university is complete without serious religious and theological study, yet this is largely the case in public higher education. It has been left, in the main, to the church colleges to supply this important element of intellectual development and concern, particularly at the undergraduate level.

Here, then, are four potential contributions of the church college that enrich, balance, and stimulate the large pattern of higher education. The writing is already on the wall, however; the proportionate part the church colleges have of the total student population is rapidly diminishing. These distinctive contributions I have listed are not related actually to the size of the college; they are dependent rather on the qualities within the college that lead it to fulfill its own vocation.

Turning now from the system of higher education, let us recognize that in the days ahead the church may need the college as much as the college needs the church. It needs the college to serve many of its youth with an academic discipline within the educational dimensions we have already mentioned. But it also needs the college for its own resources as it, the church, seeks relevance to and understanding of our pluralistic society. Scholarly investigation and interpretation on a college campus can help bring insight and involvement to the church as it ministers within this accelerated world. Thus the college becomes the church's laboratory for its scholars (faculty and students) to seek and share truth, to grow responsibility in every area of life, confronted with the relevance of the Christian faith for our lives and our times.

If these are clues to the future role of the church college, who shall determine the policies, and how shall actions be taken to assure such a contribution to the American system of higher education and to the church? Some would answer that the key is finance, and only the federal government has enough resources to undergird higher education, including our church college segment of it. It is unrealistic to point toward a single group: the faculty, the students, the church, the trustees, the president. No one, or even two, of these parts can do the whole job.

Often we forget that in our American Protestant college structure, the trustees own the institution; they are responsible for the program, policy, finances, and operation. Obviously, the trustees cannot fulfill these obligations in isolation, although this implication may be found in Ruml's suggestion about curricula policy decisions of the trustees. Nonetheless, final authority and responsibility must reside within this body; they assure the continuity of the institution and the ultimate progress toward its goals. The church might say to a prospective trustee: "We have established this institution (a nonprofit corporation) to accomplish these purposes. We are calling you to be a trustee of this enterprise, to see that it remains true to its purpose as it accomplishes its goals, that it is run effectively and efficiently. We pledge our support, but we trust you to do the job, and we ask only an accounting of your stewardship as a responsible trustee." Such an emphasis on the role of the trustee might give a basis for a better understanding on the part of the church constituency as to the complexity and the nature of the educational task and more of a willingness to accept this responsibility on the part of the trustee.

We often speak of "community" as a characteristic of the church college. If this term were applied—with its fullest meaning of cooperative understanding and action—to the three primary groups of the college—trustees, faculty, and students—we might find new ways of operation to fulfill our challenging role. Such an approach would capitalize on the common goals which already should bind these groups in both general and special responsibilities toward accomplishing the purposes of the college.

Administrators might no longer be considered a separate group, but rather as expediters of the program by serving these three groups. The operation of the program would no longer be bound rigidly in patterns of jurisdiction. Both administration and decision making become more truly a vital process. Even the ultimate policy decision before the trustees is recognized as the concluding act in a long process that might well have been a student's idea, worked on by the faculty, expedited and nurtured by the administration, studied and approved at last by the trustees. Indeed, it could have been initiated at any point along the line and such a process would de-emphasize a growing tendency toward labor-management bargaining between faculty and trustees or administration.

The trustees might through this approach emphasize clear-cut policy statements as guides for the operation of the college, long-range plans for its progress and development, and a systematic evaluation assisted by both inside and outside personnel.

Experiments with a simplified or unified approach to organization might free the faculty to concentrate on teaching, study, research, and student counseling. At the same time, they would know their ideas were always welcomed as a part of this process, and that some of their group would be called out to help worry about the college, its direction and policies.

Students participating in this community might find a new and valid sophistication as they find a new involvement in the total educational enterprise with both freedom and responsibility. Indeed, the situation in which the church college finds itself has been changed, but its opportunity for continuing its role of pioneering still exists. There is new area for its pioneering in its educational

task, its method of operation, and in its commitment and vitality as a part of the higher educational system.

There remains the decisive question: Will the church and its constituency allow and support such a college? It will do so only if trustees, faculty, and students provide the leadership and example necessary to validate the claims of the important role of the church college in the future of American higher education and the church.

NOTE: Chairman of this group was MILLER UPTON, President, Beloit College; the recorder was REGINALD W. WHIDDEN, Associate Dean, Mary Washington College, University of Virginia.

Establishment of Better Relations Between All Levels of Government and Institutions of Higher Education

ARTHUR S. FLEMMING

Immediate Past Secretary

U.S. Department of Health, Education, and Welfare

President-Elect

University of Oregon

NOTE: Mr. Flemming gave an extemporaneous presentation at this session of the conference. His remarks were not tape recorded and are not available for publication. Panelists for this group were NORMAN P. AUBURN, President, The University of Akron; VIRGINIA BLUE, Executive Director, Association of Governing Boards of State Universities; SEBASTIAN V. MARTORANA, Chief, State and Regional Organization Section, Division of Higher Education, Office of Education, U.S. Department of Health, Education, and Welfare; and EARL E. MOSIER, Assistant Commissioner for Higher Education, New Jersey State Department of Education. Moderator of this group was EARLE T. HAWKINS, President, Maryland State Teachers College at Towson; the recorder was WILLIAM K. SELDEN, Executive Secretary, National Commission on Accrediting.

The Proper Role of Higher Education in the Development of the Peace Corps

LAWRENCE E. DENNIS

Vice President for Academic Affairs
The Pennsylvania State University

THE PRESIDENT OF THE UNITED STATES has enjoined us, individually and collectively, to ask ourselves what we can do for our country.

I should like to submit the basic proposition that the Peace Corps presents colleges and universities with a momentous opportunity to respond to President Kennedy's inaugural challenge quickly, forcefully, and dramatically.

We could make such a response—

First, by pledging organizational and institutional support to the objectives of the Peace Corps;

Second, by proposing to the federal government that it invite higher education, now, into full partnership to assist in planning, fashioning, and evaluating the Peace Corps;

Third, by offering the services of highly qualified, selected faculty members on special overseas sabbatical leaves to help staff the Peace Corps during its pilot period while permanent staffing arrangements are being developed;

Fourth, by making available educational facilities essential to the training of Peace Corps personnel;

Fifth, by urging the federal government to consider converting to international Peace Corps Education Centers such overseas military establishments as may no longer be deemed necessary to our national security, and by offering the aid of appropriate higher education agencies in effecting these transformations;

Sixth—and this is by far the most important of all, for it could well be a vital long-term contribution to our national life—by mounting, sustaining, and giving top priority to programs of *education for public service and responsibility.*

That kind of meaningful response by higher education would signal to the world that U.S. colleges and universities fully recognize their international responsibilities and intend to shoulder them, whatever the sacrifice might be. It would set an example of leadership, vision, and purpose for the men and women it is our privilege to teach and the communities we are proud to serve. It could

herald the charting of an historic new dimension in the higher learning. And it would bring to its rightful fruition, at long last, the always slow, at times uneven, often constructive, occasionally mistrustful, but inevitably necessary relationship between contemporary higher education and the federal government that began two decades ago—at about the time the current crop of college seniors were born.

This relationship, whether in a stressful or a tranquil state, has been preserved through the years, I believe, largely through the cement of mutual reinforcement: Each needs the other; neither can go it alone for very long without jeopardizing its rightful mission, as those who served in positions of governmental or educational leadership in the Forties and the Fifties can attest. Had the partnership been permitted to come unstuck (as nearly happened in the early Fifties), the national cardiovascular system would have suffered irreparable damage.

Today the precious dialogue between the federal government and higher education has entered a newer, much more robust phase—as everyone will surely admit. And in this early stage of the proceedings, while stronger cement for the partnership is being mixed by both, it is well for us in higher education to contemplate the full meaning for the Sixties of the concept of mutual reinforcement embodied in the Peace Corps plan, and to assess the mutual responsibilities that this "first new idea of the New Frontier" imposes on colleges and universities, on the one hand, and on the federal government, on the other.

It is my conviction, as I've tried to make clear in my six points above, that the *proper* role—indeed, the *only* role—for higher education in the development of the Peace Corps is up front, in the copilot's seat, sharing without hesitation in the risks, helping to map the course, sitting in at the controls when necessary, willing and ready to aid in the decisions.

President Kennedy, underscoring the basic U.S. foreign policy lines that thread their way back to the Truman Doctrine and the Marshall Plan, has called on the American people "to bear the burden of a long twilight struggle. . . against the common enemies of man: tyranny, poverty, disease, and war itself." The Peace Corps has been conceived as a key component of the weapons system in that struggle. It envisions "a pool of trained American men and women sent overseas by the United States government or through private organizations and institutions to help foreign countries meet their urgent needs for skilled manpower . . . men and women with the skill to teach the young and assist in the operation of development projects—men and women with the capacity to cope with the demands of swiftly evolving economies, and with the dedication to put that capacity to work in the villages, the mountains, the towns, and the factories of dozens of struggling nations."

In today's world, those objectives are so closely entwined with the international commitment of responsible colleges and universities as to be inseparable. If U.S. higher education needs a cutting edge to test its tensile strength abroad, here it is. The concept of the Peace Corps not only merits, but demands our support. Without it, the project could not endure; to deny it our endorsement would do violence to ourselves and to our cause.

With the support of higher education for the objectives of the Peace Corps, however, should come unqualified and official recognition by the federal government of the partnership role which colleges and universities must play in planning and developing the Peace Corps on a permanent basis. In this con-

nection, it is most propitious that, in the few short months preceding the issuance of the Executive Order setting up the pilot projects and the drafting of legislative recommendations for congressional consideration, responsible educators were involved in Peace Corps planning and in background studies such as those prepared by Professor Millikan of M.I.T. and Professor Albertson of Colorado State. An *ad hoc* committee on the Peace Corps has been established by the American Council on Education, which is maintaining liaison with the government task force working under the supervision of Sargent Shriver, former president of the Board of Education in Chicago. Additional ties between the emerging Peace Corps program and the academic community are to be established very shortly. All the signs, therefore, seem to point in the right direction: Higher education will, if it so wishes, be welcomed as a partner in program planning, staff recruitment, curriculum development, the teaching and training of Peace Corps personnel, and so on.

Might I add, parenthetically, the hope that this promising new chapter in our epochal partnership will also encompass research and evaluation? Here is a golden opportunity for programmed educational research—the controlled analysis of all aspects of the Peace Corps from its inception. Even though our mythology and timidity have kept us at least a generation behind in academic research in our own institutions, we ought not to compound our sins of omission by failing to grasp this new chance in the field of international education!

With respect to staffing the Peace Corps, particularly during its initial stages, it seems to me that colleges and universities should stand ready to go the extra mile, if need be, to assure the quality and integrity of the program. One tangible way in which this might be done would be for those institutions with special competence in the fields of teacher education, agriculture, and health (which are to be, initially, the areas of Peace Corps concentration) to establish special overseas sabbatical two-year leaves of absence for outstanding, qualified, physically fit faculty volunteers who could serve as on-the-job project supervisors in the Peace Corps. Upon their return to the campus, these men and women could "plow back" what they've learned and thus help generate continued interest in and support for the program.

According to the President's message to Congress, Peace Corps personnel are to be made available to developing nations in the following ways:

1. Through private voluntary agencies carrying on international assistance programs.
2. Through overseas programs of colleges and universities.
3. Through assistance programs of international agencies.
4. Through assistance programs of the United States Government.
5. Through new programs which the Peace Corps itself directly administers.

Quite obviously, the special training of Peace Corps task groups for these various overseas arteries will necessitate, not only a commitment of competent faculty and staff, but also the use of appropriate educational facilities in this country. Here again higher education must shoulder an affirmative responsibility if the program is to have a chance of success. How often in recent years have we complained to one another about the tragically low usage our educational plants get during the summer months! Yet how very little, really, we have

succeeded so far in improving plant utilization! The concentrated special education of Peace Corps task groups could well be what we've been waiting for to dramatize and spur the concept of college going on a year-round basis.

As I understand it, the pilot Peace Corps project will require campus facilities on a very modest and limited scale in the summer of 1961, and a half dozen or so institutions will be invited, after careful consultations between governmental and educational representatives, to contract for the housing and training of Peace Corps task groups. If these pilot programs are successful, and Congress decides to create the Peace Corps on a permanent basis, the summer Peace Corps projects (as well as their academic year counterparts) should grow in scope and in number.

But the American campus does not, by any means, have a corner on facilities that might be suitable for Peace Corps training. As a matter of fact, the federal government itself already has direct access to facilities overseas, which—if properly converted—could provide unique regional Education Centers for Peace Corps personnel from the U.S. and elsewhere. I refer to the possibility that as certain of our overseas military establishments may be judged by the government to be no longer essential to our national security, they be transformed into institutions for international education.

This is not a new idea, nor is it original with me. But though it has been discussed within and outside government for a number of years, it takes on a timeliness and relevance when considered in connection with the Peace Corps plan, and it would provide another constructive avenue of cooperation between institutions of higher education and federal agencies.

Let us suppose, for example, that the United States decided to demilitarize an air base in North Africa. Two or three American colleges or universities, working in concert with the Departments of State and Defense, ICA, USIA, and perhaps various private foundations, could convert such a facility into a University of North Africa, designed to establish cultural rapport between large numbers of American and North African people, and to serve as a training center for Peace Corps task groups assigned to that part of the world. The cooperating "partnership" institutions in this country would be responsible for the development of the faculty, the curriculum, and the student body—using the "year of service abroad" idea as a starting point for student recruitment. Trustees, administrators, and advisers from both the U.S. and North Africa should be readily available.

Initially, it might be feasible to set up such an institution only on a bicultural basis, but there is no reason why it and others like it might not, in time, become multicultural international educational centers. Indeed, it is quite conceivable that, in the event the United States should decide to transform one or more military bases into educational centers, the conversion could well take place under the auspices of the United Nations itself. But the how, when, and where of this idea are beside the point—colleges and universities should make known to the federal government their desire to help carry out such a plan as still another possible contribution to the Peace Corps.

Now I come to the last and most crucial aspect of this six-point proposal: the need for the establishment on a permanent basis in our colleges and universities of programs of education for public service and responsibility. In the

last analysis, the success of the Peace Corps and other similar international service projects is going to depend on whether or not we assign top priority to education for public responsibility in both our resident and extension programs.

The men and women who may be selected for service in the Peace Corps this year and in subsequent years will one day return to their homes and communities in this country. In all likelihood they will be expected to assume positions of public leadership. Similarly, countless numbers of their college classmates who might not have served overseas will also be appointed or elected to positions of public responsibility in a highly specialized, yet wholly interdependent society that is now undergoing a fantastic rate of profound social, economic, cultural, and technological change. How well these young adults will be equipped to shoulder public responsibilities—how they will fare as tomorrow's leaders—is largely up to us.

I believe we have arrived at a point in our history when we should think seriously about an imaginative proposal advanced in a commencement address over a decade ago by Mr. David Lilienthal—the proposal that the United States adopt a program of *universal public service*. Under this concept, every educated person who is qualified to do so would be expected to set aside a number of years for the rendering of service in the legislative or executive branches of his local, state, or national government, either at home or abroad. Out of the best and most productive years of each man's life, he would carve a segment in which he would put his private career aside to serve his community and his country—and thereby the cause of freedom itself.

What Mr. Lilienthal envisioned was "a fluid kind of citizen-service, in which men and women move from private life into public service for a period of years, and then back to private life." Then, on their return to private life, "these citizens will be experienced in firsthand knowledge of public affairs and of the special difficulties that beset the public servant; we will have public servants whose judgment will be enriched by recent experience in the day-to-day problems of private affairs."

Certainly the Peace Corps idea has within it the seed corn for a universal public service program. And when we speak of concepts of "public service" and "public responsibility" we are in the realm of education—for these are value concepts that denote an attitude toward one's fellow man—a "public philosophy," if you will. Dealing with such concepts is, or should be, the primary mission of higher education in our time. It is, in fact, part of the public responsibility of every college and university to nourish and stimulate a sense of commitment to public service in the minds of all students, young and old alike.

In the long run, it will require just such a sense of public commitment to build and sustain and strengthen the Peace Corps. To judge by the exciting and enthusiastic response to President Kennedy's plan from all over the country, there is a deep reservoir of interest among people from every walk of life, regardless of age. We should not be surprised at this phenomenon. For there has been frustration in the American heart, and it has mounted slowly, through wars both cold and hot, in a revolutionary age where anxiety substitutes for peace and machines supplant men. For almost a generation now, we have been groping to find again the path of American purpose.

It has been there all along, of course, and we needed only to part the under-

brush to discover it. As a nation, we were always happiest when we had a sense of physical mission, when we had something to *do*, above and beyond self. As long as the frontier could be pushed farther back at home, we had it—"happiness in the doing," as one commentator phrased it, "and not in the deed." The fullest meaning of the Peace Corps to modern America is that we can busy ourselves in the *doing* once again—not only in this country, nor in this continent alone, but in half the world itself.

We know that we cannot transplant a culture to the millions of people in the world's underdeveloped nations who are only now beginning to realize and to ask what can be theirs in terms of health and learning and opportunity. Their way of life, of course, must be their own; it must be indigenous to their native soil. But we can help them get started and work with them to achieve a better way of life.

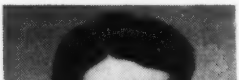
The mission of the Peace Corps, then, can be a moral and blessed mission that could occupy us an entire lifetime. Though it is fraught with many pitfalls, and could (in the event higher education were to shirk its responsibilities) result in dismal failure, the Peace Corps can give us the impetus, the thrust we need to find ourselves. In the words of Judge Learned Hand:

> By some happy fortuity man is a projector, a designer, a builder, a craftsman; it is among his most dependable joys to impose upon the flux that passes before him some mark of himself, aware though he always must be of the odds against him. His reward is not so much in the work as in its making; not so much in the prize as in the race. We may win when we lose, if we have done what we can; for by so doing we have made real at least some part of that finished product in whose fabrication we are most concerned—ourselves. And if at the end some friendly critic shall pass by and say, "my friend, how good a job do you really think you have made of it all?," we can answer: "I know as well as you that it is not of high quality; but I did put into it whatever I had, and that was the game I started out to play."

And so, whatever the outcome, we must press on with the Peace Corps and, as educators, assume our proper role in its development. No one claims it will be an easy task, but "since we are men, let us play the part of a Man."

NOTE: Chairman of this group was THEODORE M. HESBURGH, C.S.C., President, University of Notre Dame; the recorder was EARL E. EDGAR, Head, Department of General Studies, Kansas State University; the resource persons were MAURICE L. ALBERTSON, Director, Youth Corps Study Project, Colorado State University; and HARRISON SASSCER, Staff Associate, American Council on Education.

Overseas Travel-Study Programs in U.S. Higher Education



IRWIN ABRAMS

Professor of History
Antioch College

THE GROWTH OF UNDERGRADUATE FOREIGN STUDY programs in the last decade has been phenomenal. The distinguished authors of the Morrill Report have declared that "study abroad, effectively organized and directed, should be an important and integral part of undergraduate education." But while the educational potential is enormous, the rapid proliferation of programs has brought a multitude of problems. The conveners of the first national conference on undergraduate study abroad, held in Chicago in October 1960, felt that unless some systematic attention were given to such matters as academic standards and the impact of the programs overseas, the foreign study movement could "literally turn into an educational scandal."

The first step is to clarify objectives. Institutions must define the aims of these programs more clearly, relate them to their educational program at home, and state them in terms which permit evaluation. There are four types of objectives which these programs might legitimately serve: 1) providing specialized study of foreign language and civilization for students with well-defined academic and vocational intentions; 2) furthering the objectives classified as general education; 3) promoting international understanding, which is rather a goal for the sending institution than for the student; 4) serving a greater number of students without expansion of stateside facilities.

For the great majority of undergraduates, the proper aim of study abroad should be general education. Specialized study should usually be left for postgraduate years. At the same time, these undergraduate programs will ultimately prove the most effective recruiting grounds for the increasing number of Americans needed in various capacities overseas. An undergraduate experience abroad can lead to a realistic choice of an internationally oriented career, the training for which will generally come at the graduate level.

There are three basic questions which we should ask the foreign study planners: 1) How profound is the cultural immersion in the foreign community? 2) What is the academic content of the program abroad? and 3) How is the program related to the student's entire education?

It is those programs which provide the student with an experience in depth of the alien society which can have the greatest educational impact. The weakest programs are those study tours whose members carry their own insulating culture along with their baggage. Compare this with the experience of the student who meets a daily challenge of adjusting to unfamiliar ways and values. The most effective method of cultural immersion is to house the student with a family, where he can become a member of the basic social group of a foreign society. The home stay is one of the most valuable experiences the student can have abroad. In the academic setting, a profound immersion is not often possible. Few American undergraduates are able to tackle the foreign university on its own terms. The relationship of the American programs to the foreign educational systems has consequently taken many forms, ranging from the self-contained branch campus, where American professors lecture in English, to arrangements by which students are enabled, sometimes with tutorial assistance, to handle courses at the foreign university.

While a student can have a much more intimate experience of a culture than a tourist, there are some limitations. He may achieve a measure of acceptance among his fellows and take active part in their activities, but the university world is itself a distinctive subculture. An opportunity for a more intense encounter that has been largely neglected is that of job experience abroad. Princeton has a summer work program "to give selected young men, some of whom will become business leaders in this country, an opportunity to penetrate deeply into the life of another country. We feel that this can best be done by working side by side with workers in another nation, speaking their language and sharing their burdens." The experiences of colleges like Keuka and Antioch, which have transported their work programs overseas, would tend to support the value and the feasibility of this approach.

But, cultural immersion is not an end in itself. The foreign environment is to be conceived of as a laboratory, where certain experiences are arranged for the student because of their potential yield in the understanding of man and his civilization. The central educational purpose of the college is not fulfilled until these experiences are passed under critical review in the dialogue between student and teacher. The second question for the planners is, therefore: What is the academic content of the program abroad? Despite the stimulating resources for intellectual experiences, the level of scholastic work abroad is frequently lower than at home. There is a disposition to be less demanding of the student, to feel that he is getting so much out of just being abroad that it would be cruel to insist that he think about it in a disciplined way. It is true that conventional classroom methods may make less sense abroad, but the proper inference to draw is not that standards should be lowered, but that exciting ways should be developed to stir the students' minds.

In the matter of academic standards, the worst offenders are summer study tours. Too often they are run on a financial basis or even organized by travel bureaus, with academic considerations quite secondary. But even when there is an honest effort at education, the very nature of such a fast-moving expedition makes learning difficult. What it amounts to frequently is a succession of images passing before the eyes of the student, one stimulating experience following another, with very little thought about it crossing his mind. There are serious

academic deficiencies in some residential programs as well. The kind of recommendations which are made to meet this problem highlight the points of weakness. They include: 1) keeping the foreign project an integral part of the educational program of the sending institution, not only in its announced purposes, but by subjecting courses and staff appointments abroad to the same kind of approval as curricular offerings and faculty appointments at home; 2) insisting upon high academic and personal qualifications for participants, including language preparation appropriate for the particular project; and 3) evaluating the student's achievement by the same type of projects, papers, and examinations as used at home, employing standardized language tests wherever possible. The ultimate responsibility for evaluating and crediting the overseas performance must rest with the institution that grants the student his degree, whether it runs its own program or permits him to enter another.

Students will often insist that they have gained much more from their foreign sojourn than they ever get credit for at home. This is true, even in the area of language competency. It is clearly an intellectual achievement to conduct one's affairs in a foreign tongue, but do we have an instrument to measure it? What language test can measure the student's achievement in being able to distinguish what is to be translated and what is not? How can we measure the intuitive grasp of foreign ways which permits one to understand those silences that are more eloquent than words? But while there are areas of valid achievement which pose difficulties for present methods of evaluation, we cannot permit the student to justify his foreign experience without some tangible evidence of intellectual accomplishment. His nonacademic experience may have been the richest part of his life abroad, but it is not life abroad, but *the examined life*, which is the true justification of a foreign program conducted by an educational institution.

This brings us to the third question for the program planners: How is the foreign experience integrated with that of the home campus? Orientation for the foreign experiences should begin when the student comes to college. His whole liberal arts education is the preparation for his journey, and what he needs to do in his last campus period before embarkation is to try to integrate what he has studied in the light of how it will help him abroad and to define his purposes and relate them to his broader educational plans. An ideal orientation program would include courses in American civilization, world history and geography, art history, and an introductory social science course in which the student would acquire an elementary skill in social analysis. The theme would be the exploration of the American community. Field trips and examination of such diverse data as advertising copy, newspapers, children's books, and films would provide practice in the methods of exploring a culture and at the same time give the student a better understanding of his own society. Orientation would continue abroad and finally, on the student's return, the institution would provide the academic setting within which the student could draw his conclusions about his discovery of two worlds. The dialogue between student and teacher might occur within a course, a seminar, a tutorial study, an examination, or around an essay or completed project. If the student traveler is to find the wealth of the Indies, he must not only carry it with him when he sets out; he must bring it home to weigh each jewel on the scales of scholarly criticism.

The institutional goal of furthering international understanding means man-

aging programs abroad in such a way that a better understanding of the United States, and even good will toward us, might result. Of paramount importance is the maintenance of high academic quality. It is no easy matter under any circumstances to explain to foreign intellectuals the special characteristics of an educational system which provides higher education for the many and not just the elite. So-called educational programs with little intellectual content can only confirm their worst prejudices about the whole American educational enterprise.

We must be especially careful to cooperate with our foreign colleagues wherever possible. If our American traditions of protectiveness for our students involve us in arrangements abroad which tend to isolate them from the local educational system, we should be careful to explain the situation, as well as to try to compensate for it. Such arrangements are likely to increase in the future with the trend toward more sophomore programs and especially because of the serious overcrowding in university centers abroad. We must do a better job of coordinating our programs, lest we find our students not only crowded out but unwelcome. A major concern should be the consideration of reciprocity. American programs benefit mightily from the government support abroad which keeps academic fees so low. Instead of congratulating ourselves for balancing the budget, we should be seeking ways to make some contribution to educational facilities overseas or to bring more foreign professors and students to America in return for the favors which we are enjoying in their countries. Such internationalization of our campuses would have a significant potential value for the great majority of our students who are unable to study abroad.

The next ten years are likely to see an even greater boom in foreign study. Thousands of young Americans will find their way overseas, traveling, studying, and working in projects of greater variety than today, and in parts of the world where current programs have not yet ventured. It will be a major order of business for American education to coordinate these developments, to maintain standards of quality, and to see to it that the rich potentialities of foreign travel are effectively exploited in the interest of valid educational purpose.

NOTE: Panelists for this group were JOHN A. GARRATY, Professor of History, Columbia University; DONALD J. SHANK, Executive Vice President, Institute of International Education; and EDWARD W. WEIDNER, Professor of Political Science, Michigan State University. The moderator was HOWARD A. CUTLER, Director, General Education, The Pennsylvania State University; the recorder was IVAN M. STONE, Dean of the College, Beloit College.

What Faculty Members Can Do on the Issue of War and Peace

RICHARD C. SNYDER

Chairman
Department of Political Science
Northwestern University

LET ME SUGGEST BRIEFLY some of the favorable and unfavorable elements in the present climate of opinion which appear to bear on the problem of gaining intellectual and social control over war—the factors leading to the use of violence in the interactions of nations and the conditions necessary for institutionalization of nonviolent modes of interaction.

First, the favorable: 1) There has been a growing realization of the very real sense in which the new weapons present us with an extremely dangerous and novel situation; 2) there seems to be greater recognition of the crucial role of knowledge and research—in government, private industry, and universities; 3) there is evidence of a steadily growing conscience among political leaders and business leaders to buttress the longer standing concern of the scientists; 4) there is indication of a strong body of world opinion favoring a renewed effort to establish real international controls; and 5) we are probably better prepared, in a technical sense, to tackle systematically the problems of war and peace than we were a generation ago—as scholars we may be able to take advantage of the movement from knowledge to action when political opportunity strikes in the near and more distant future.

Now the unfavorable: 1) "Anti-research" sentiment persists—usually in the form of the familiar "why prove what everyone knows" argument, the conviction there is not enough time to accumulate reliable knowledge by the slow basic research process, the need for answers rather than more questions, and, finally, the feeling that what we need to know is how to stop the Russians, not a sound theory of how and why nations behave as they do; 2) there is some reason to believe we have an imbalance in our research efforts, in two senses: a) less research (directly on war and peace) by individuals and groups in universities than in industry or government; b) more research on hardware than nonhardware aspects, i.e., on technological and military factors per se as against political, sociological, and psychological factors; 3) it is also possible

to detect a kind of battle of research and research groups within, and closely connected with, the policy-making process. Often findings are guided by, or employed to justify, certain positions. To the extent this is true, it is not due to intellectual dishonesty or to a silent conspiracy but to a natural division of labor and the attachment of research facilities to specialized functions or service agencies.

The foregoing lurk in the background and might be borne in mind as I raise a number of questions.

What are the significant areas of ignorance? The problems of war and peace have been with us for hundreds of years. Now we seem to be getting more rigorous in asking what we know and what we don't know about the conditions under which societies and nations choose nonviolent rather than violent modes of accommodating their conflicts. Persistent puzzles and significant conflicting hypotheses come to mind. First, the "minds of men" approach versus the "national calculation" approach—the first finds the roots of war in innate human aggressiveness, the second looks to the behavior of official decision makers and to properties of the international system (e.g., national sovereignty). Closely related is a second contrasting set of hypotheses; namely, war is either the result of rational calculation (or miscalculation) *or* irrational or nonrational factors at work in the policy-making process. Implicit here is a notion that the road to war may be characterized by a critical shift from "reason" to "emotion" as a decision style or as bases of choice.

Another puzzle has to do with the role(s) of individual leaders. Do we know whether it is the great leader (be he good or bad, power hungry or not, wise or unwise) who is responsible for the great decisions leading to violence or is it rather impersonal historical forces over which individual leaders or countries have little direct control which sweep us along? One suspects elements of both, but existing theory tends to accept one or the other exclusively. Furthermore, does war come as the result of a slow, almost imperceptible, drift or does it arise out of an overt choice at a particular point in time? To put it another way: Are all alternatives gradually reduced to one, or at some point does someone decide war is inevitable?

Competing hypotheses also seem to be embedded in these questions: Is a reduction of tension and distrust prerequisite to disarmament and/or arms control? A familiar, and usually black-or-white, alternative is reliance on national self-restraint versus complete internationalization of military power. Underlying this is the fundamental problem of whether community or political integration precedes law or vice versa. How does one society come to have an image of another as *the* enemy? What is the relationship between accurate and inaccurate perceptions of goals and behavior patterns in such an image?

Clearly we are living in a period of recurrent crises. How much do we know about the anatomy, the physiology, and the natural history of international crises? Does a crisis induce more or less rational decision making? Given nuclear weapons (and other conditions) can a limited war be kept limited? Expert opinion is divided.

I have tried to formulate central queries which are susceptible to empirical answers of more or less reliability depending on how good our research and theory are. Fortunately, the task of mapping our ignorance has been enormously

advanced by the five Programs of Research sponsored by the Institute for International Order. The five reports cover: 1) Arms Control; 2) Economic Factors Bearing Upon the Maintenance of Peace; 3) International Rule of Law; 4) Communication and Values in Relation to War and Peace; 5) National and International Decision-making. These inventories and research planning reports give us a much better foundation for identifying and researching the most significant projects than we have ever had.

What can or should be the role of faculty research? Apart from its continuing responsibility for the first question above, I see the following as among the primary obligations of the academic community: 1) to maintain decontaminated, uncommitted, and basic inquiry, carried on by the highest standards, and reported forthrightly and clearly to American society and its political officials; 2) to help make "war and peace" a respectable as well as meaningful research focus; 3) to achieve a more effective mobilization of intellectual resources and research personnel—particularly to make research cumulative and to maximize the efforts of "lone" researchers. It would seem to be the unique responsibility of the academic community to persist in asking questions, querying assumptions, and moving ahead with short- and long-term research which may be unpopular and even irrelevant to current policy. As suggested earlier, scholars must have the "homework" done when opportunity strikes. Moreover, today's irrelevancy may be tomorrow's relevancy.

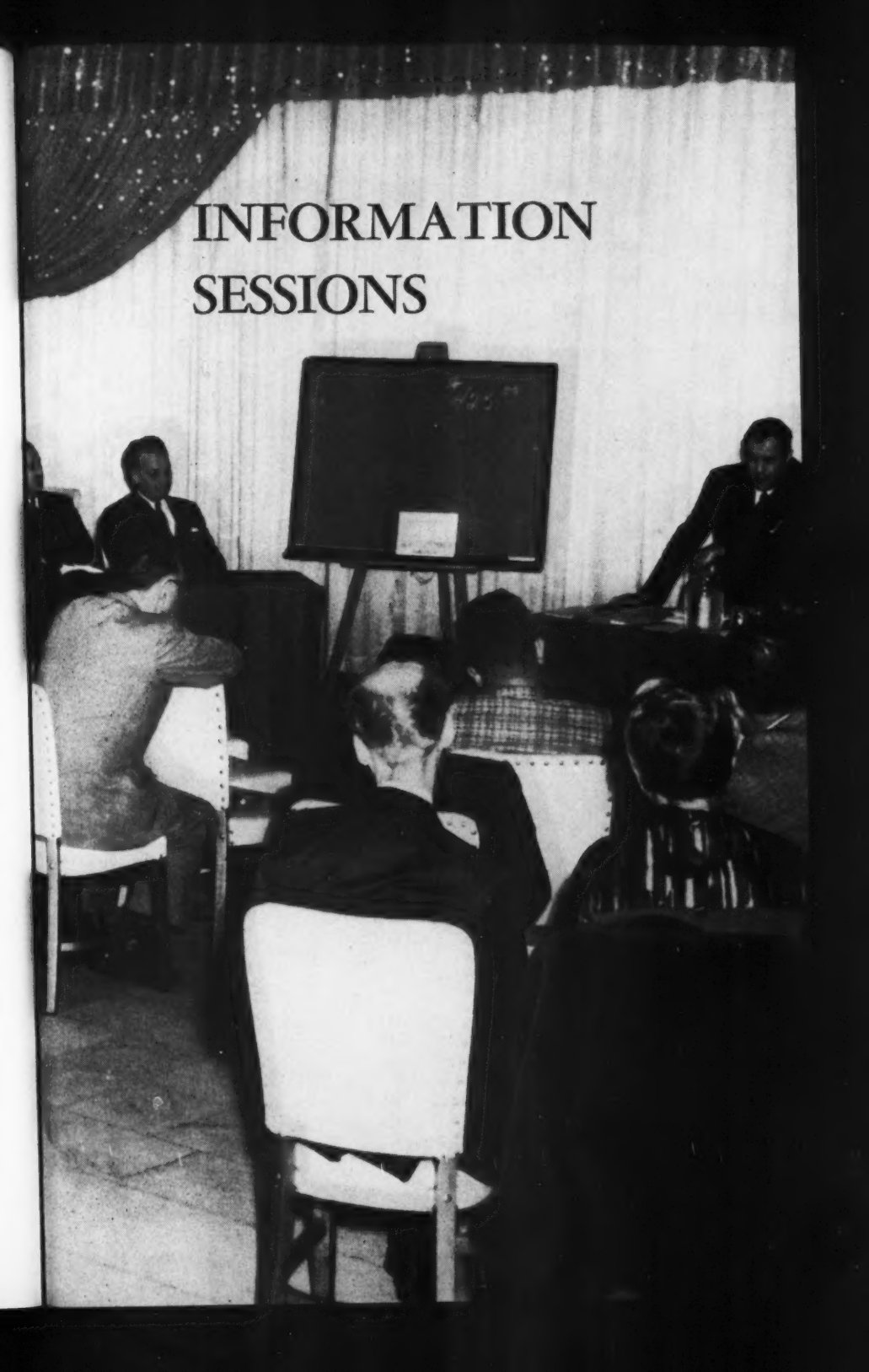
What kinds of research can or should be fitted into a multiple strategy? The problem is so complex and our knowledge is so fragmentary that a wide range of simultaneous research activities is required. We simply do not know enough at this stage to bet safely on one strategy. Whether carried on by isolated individuals or centers, and regardless of scale, I see the following among the necessary strategies: 1) the search for historical analogs *and* future trend projections constructed on the basis of different anticipated future states; 2) case studies of violent and nonviolent conflict *as well as* verification or exploration of hypotheses through noncase studies; 3) a combination of field *and* experimental studies; 4) immediate, short-run studies having immediate payoff *and* long-term studies whose fruitfulness may be a matter of faith; 5) research which starts with a problem and goes to general theory *and* vice versa; and 6) research projects geared to several levels of generality and to several units of analysis.

Is there a role for student research? Emphatically yes. Recent experiments with undergraduate research seminars and simulation of international relations in my own institution indicate that participation in knowledge gathering may be a very potent learning motivation. Abstract or combative discussion of problems is no substitute for hardheaded inquiry; allegations and easy assumptions are one thing, demonstration and logical analysis are something else. Under proper guidance, students could contribute effectively to needed data. To attempt to research some of the questions mentioned above is a sobering experience for the student but one which is salutary. This is also a way of recruiting for scholarship.

How are research and teaching interrelated? The relatively poor state of knowledge (as distinct from hope and exhortation) and the gulf between researchers and teachers tend to produce cynicism or apathy or a sense of

futility in students. Apathy and futility flow from "fate," "inevitability," and other symbols of oversimplification. Cynicism flows from lack of awareness of where control points and choices might lie.

NOTE: Chairman of this group was HAROLD TAYLOR, Chairman, Committee on Research for Peace; the recorder was ROGER W. RUSSELL, Professor of Psychology, Indiana University; the resource persons were GEORGE A. BEEBE, Director, Institute for International Order; and EDMUND H. KELLOGG, Special Assistant, Disarmament Administration, U.S. Department of State.


INFORMATION
SESSIONS

Commentary on Recent Literature on Higher Education

RUTH E. ECKERT
Professor of Higher Education
University of Minnesota

THE NEW BOOKS ON COLLEGE PROBLEMS suggest, perhaps better than anything else, the "growing edges" of our American venture in higher education. Eighty-one books or major bulletins were published in the United States during 1960 dealing with issues, accomplishments, or proposals for higher education, or more than double the production rate (thirty-five books per year) indicated in Russell Cooper's analysis of the literature for the 1952-57 period.

College professors were the principal authors or editors of thirty-one of these books and contributors to many others. Ranking next were college administrators who had twenty-seven volumes to their credit. Thirteen authors were affiliated with regional or national educational agencies, two were from other fields, and for eight such identifying information was lacking.

Scholars and scientists in the basic disciplines, some of whom now hold administrative positions, produced thirty-three of these books, with twelve of the authors drawn from the humanities, sixteen from the social sciences (principally history, sociology, and economics), and five from the natural sciences. Only twenty books were written by persons in schools or departments of education, some of whom were originally trained in academic fields. Persons in other professional fields produced four volumes, and the disciplinary "parentage" of the other twenty-four volumes could not be determined.

Public and private higher institutions were about equally represented among authors holding academic appointments, but, as Mr. Cooper found in 1958, more than three-fourths were on university, as distinguished from college, staffs. Harvard, with five contributors, led the ten private universities represented, while Michigan State University ranked first among public institutions, followed closely by California, Minnesota, and nine other institutions.

Publication agencies. More than half (fifty-five per cent) of these books were published by university presses, with Harvard again in front, or by other educational agencies, with the American Council on Education decisively ahead on this score. But commercial presses were becoming increasingly involved, particularly Harpers, Wm. Brown, and McGraw-Hill. The typical book in this field in 1960 cost $4.35 and included about 200 pages. But there was great variation in these respects with the top fourth ranging from 270 to 1200 pages and from $6 to $20 in price.

Major topics. Each volume was classified both by major theme and by method of study. Some books were hard to classify, but the following table suggests the kinds of questions that have concerned recent writers and the ways they have approached them, with particular stress on the bases used in reaching judgments.

APPROACHES

Topics	Philosophical	Experiential	Historical	Descriptive	Survey	Evaluative	Total
General discussions	5	–	1	7	3	–	16
Student personnel	–	–	–	4	5	2	11
Curriculum	2	3	1	12	5	–	23
Instruction and staff	1	5	–	3	1	2	12
Administration	1	–	2	4	7	–	14
Evaluation	–	–	1	3	1	–	5
Totals	9	8	5	33	22	4	81

Several 1960 books afford good overviews of current problems and developments or explore the question of what higher education is for. The junior college claimed the spotlight in discussions of various types of higher institutions. The problem of students continued to engage and perplex educators, with fresh looks taken at who may go to college in the 1960s, what college students think, how foreign students adjust to their new environments, and research needs in this area.

General education programs were described in one major series of publications, and the progress made in this field assessed in another volume. But there seemed to be somewhat less interest nationally in this topic than five or ten years ago. Notably lacking in 1960 were books describing the design and strategy of education in individual colleges. College teaching was not extensively discussed in 1960 publications, but college teachers themselves were put under the microscope in several revealing biographies and in pioneering studies of why they join college faculties, how they prepare for such service, and what keeps them in the field. The internal and external relations of higher institutions were re-examined in several volumes, with particular stress on the role of the federal government in this field. International cooperation in higher education was the subject of seven books or bulletins last year.

Strikingly few writers, even in 1960, had a clearly defined theoretical base for their studies or attempted to test specific hypotheses about the clientele, methods, or outcomes of higher education. But a careful look at the new books suggests that we are moving toward better conceived and executed studies. An encouragingly higher percentage presented careful descriptions and analyses of programs, with empirical data often employed to test or supplement personal judgments.

NOTE: Chairman of this information session was PAUL G. BULGER, President, State University College of Education at Buffalo.

Current Legislative Issues Before Congress

RALPH C. M. FLYNT
Assistant Commissioner for Legislative and Program Development
Office of Education
U.S. Department of Health, Education, and Welfare

PRESIDENT KENNEDY'S Special Message on Education, delivered to the Congress February 20, 1961, outlines a comprehensive program of aid to the public schools as well as to colleges and universities and to college and university students. The program is summarized as follows:

1. For assistance to the states in the construction of needed classrooms and for increase in teachers' salaries and improvement of the teaching profession, a three-year program is proposed. The program would authorize appropriations of $666 million for fiscal year 1962, $766 million for fiscal year 1963, and $866 million for fiscal year 1964. These sums would be distributed to the several states on the basis of their relative personal income and number of pupils in average daily attendance, excepting that no state would receive less than $15 per pupil in average daily attendance. Ten per cent of the first year's appropriation would be set aside for special projects to assist the states in meeting the needs of underprivileged children, children in slum areas, children of migrant workers, and other similar special education groups. The same sum of money would be available in each of the two succeeding years. The states would indicate to the Commissioner of Education how they elect to utilize the funds available. They may elect to expend all these funds on construction or on teachers' salaries, or they may expend the funds for both purposes. States would be expected to distribute ninety per cent of their allotments on the basis of such minimum funds or equalization programs as they now have in effect provided these plans give the highest priority to the neediest districts.

2. The program for college and university facilities is divided into two parts: a) extension of the College Housing Loan Program for five years with an annual authorization of $250 million a year (this program would continue under the same terms and conditions as the current program), and b) establishment of a new, similar, long-term low-interest rate loan Program for Academic Facilities authorizing $300 million each year for five years to assist in the construction of classrooms, libraries, laboratories, and related structures.

3. Assistance to college and university students in a five-year program of scholarship grants to able and needy students would be authorized in the amount of 25,000 scholarships for the first year, 37,500 for the second year, and 57,000 for each succeeding year thereafter. The program would be administered through state scholarship commissions created or designated by the state for that purpose. The selection would first be on the basis of ability. Need would then be established and stipends up to a maximum of $1000 paid to each student, who would be free to attend the institution of his or her choice and pursue any course of

study chosen. Scholarships could be held for four years, provided the student maintained a satisfactory standing on the basis of the standards of the higher institution attended. Need would be recalculated each year. Each institution would receive a $350 flat grant to assist it in some measure in bridging the gap between the cost of education and the tuition and fees charged. State commissions would be required to choose students without regard to sex, race, creed, or color.

4. The President has also directed the Secretary of Health, Education, and Welfare to convene a broadly based national body to review the forty-four-year-old National Vocational Education Program, first authorized by the Smith-Hughes Act of 1917, and to propose the necessary legislation to bring about an updating and modern decision of this program.

NOTE: Mr. Flynt was unable to be present at this session of the conference. His paper was delivered by PETER P. MUIRHEAD, Director, Financial Aid Branch, Division of Higher Education, Office of Education, U.S. Department of Health, Education, and Welfare. EDWARD L. KATZENBACH, Deputy Assistant Secretary of Defense and Manpower Resources, Designate, U.S. Department of Defense, spoke informally at this information session. Chairman of the session was RUSSELL I. THACKREY, Executive Secretary, American Association of Land-Grant Colleges and State Universities.

Report on Developments in Segregation-Desegregation

REED SARRATT
Executive Director
Southern Education Reporting Service

THE LAST YEAR has brought relatively little change in the status of racial segregation-desegregation in higher education in the United States. Georgia was the scene of the only change accompanied by violence. Two Negroes became the first of their race to enroll at the University of Georgia. This left two states —Mississippi and South Carolina—that have maintained complete segregation in state-supported colleges and universities. Alabama is a third state that does not now have both white and Negro students attending a state institution. But in 1956 Autherine Lucy was admitted to the University of Alabama. Although she was expelled after three days, the University of Alabama remains under court order to admit qualified Negro students.

The University of Tennessee, which under court order admitted Negroes to its graduate and professional schools in 1952, in the fall of 1960 voluntarily adopted a policy of opening its doors to qualified Negro undergraduates.

Negro enrollments increased somewhat this year in those institutions which already had desegregated. But, with the exceptions noted, the *status quo* was maintained. According to the records of Southern Education Reporting Service, there are today 140 formerly all-white tax-supported institutions above the high school level which are desegregated in practice or in principle. These desegregated institutions are sixty per cent of 228 predominantly white public junior and senior colleges and universities in the seventeen states (and D.C.) that in 1954 maintained compulsory segregation.

Although the rate of change has been slow during the last year, some developments point to a possible quickening of pace. The federal courts are showing impatience with the delaying tactics of some Southern states. The U.S. executive departments almost seem to be moving in the direction of stronger policies and actions in all fields of civil rights, including education. Worthy of particular note are three reports submitted to the President since November 1960. Two came from national commissions—the President's Commission on National Goals and the United States Commission on Civil Rights. Both called for an end to racial discrimination in education and agreed in proposing that federal financial assistance be withheld from publicly controlled institutions which do not admit Negroes. The Southern Regional Council in January 1961 submitted to President Kennedy a forty-eight-page report containing eighteen proposals for actions by the Executive Department "to strengthen civil rights and improve race relations."

NOTE: Chairman of this information session was WARREN C. LOVINGER, President, Central Missouri State College.

Reports on Research Projects in Higher Education

JOHN K. FOLGER
Associate Director
Southern Regional Education Board

ALL OF THE REGIONAL COMPACT AGENCIES have sponsored or conducted some studies during the past year. Some of these are carried on by the compact agency staff but others are conducted in universities with partial support from the compact agencies.

One major area of study, which has been of concern to the regional agencies, is the recruitment of college faculty members. Last year the New England Board of Higher Education sponsored a series of conferences on faculty recruitment and retention and also supported two studies of recruitment problems. Both of these studies will be published in the near future. One conducted by Dean Kinnane of Boston College is a survey of undergraduate attitudes toward college teaching as a career. The other by Mr. Hartung of the University of Rhode Island is a study of some motivational factors in the selection of college biology teaching as a career.

In this same area the SREB recently published John Gustad's study entitled "The Career Decisions of College Teachers," which investigates factors which lead people into teaching and other factors which have kept them there or have caused them to leave teaching. The Southern Regional Education Board is currently conducting three studies in this area of recruitment for a college career. One is an extensive study of college seniors' plans for graduate study and the whole problem of identification and recruitment of talented persons for graduate study. The research, being done by Mr. Grigg at Florida State University, will also try to make some estimates of the number and type of talented college seniors who do not plan graduate study. Another study, being done by Mr. Miller, is concerned with faculty development in small colleges. What can the college do to develop the abilities of the faculty that they have? At this period of faculty shortages, many institutions will have to take people as faculty members whose preparation is incomplete. Miller's study seeks to provide practical answers which can be used by college administrators in upgrading the faculty they have. Another study under way at the Southern Regional Education Board deals with the job choices of graduate students who are just entering college teaching. What are they looking for in a job? What role does the department play in their placement and what are likely to be some consequences of present graduate student values about jobs?

The Western Interstate Commission is planning a conference next summer on methods of studying faculty, designed for administrators of Western institutions. The three regional agencies and the American Council on Education sponsored a conference on faculty work load and a conference report has been published by the American Council during the past year.

Another continuing research interest of the regional agencies has been in the need for educational programs in graduate and professional fields. During the past year, the Western Interstate Commission made a study of needs for teachers in the special education field. This report was printed under the title of "Teachers of Exceptional Children for the West." The New England Board of Higher Education is making a study of agricultural education which will be quite extensive and go beyond the usual manpower analyses. The Southern Regional Education Board made a study of medical manpower needs in the South and made suggestions for meeting these needs. These are merely examples of the continuing concern of the three regional agencies with program planning and needs in higher education in a wide variety of fields.

Each of the three agencies collected a good deal of information and each serves as a center for information on higher education and its problems for the institutions in their regions. The Western Interstate Commission published two very useful studies during the year—"College Self-Study" and "Research on College Students." Each of these reports is concerned with methods of making studies of institutional problems.

EDWIN HINDSMAN

Research Coordinator, Cooperative Research Branch
Office of Education
U.S. Department of Health, Education, and Welfare

THE U.S. OFFICE OF EDUCATION, from July 1956 to February 1961, received 1297 research proposals; 339 were signed into contract. Final reports have been approved for 105 projects. Of the 339 projects which have been supported, sixty-seven have been selected as studies dealing with problems relevant to higher education. The studies may be grouped roughly into the following categories: 1) *curriculum*—twenty-four studies; 2) *college attendance and retention*—fifteen studies; 3) *student characteristics*—fourteen studies; 4) *institutional characteristics*—six studies; 5) *administration and public policy*—three studies; 6) *educational achievement of students*—three studies; and 7) *faculty*—two studies.

Curriculum. Eleven studies on teacher education have emphasized evaluation of on-going teacher education programs as well as experimental approaches.

Researchers concerned with the teaching-learning process at the college level (seven studies) have centered their attention on the nature of the learner, the teacher, the environment, and the substance of learning. The remaining studies classified in the area of curriculum have dealt with attitudes toward adult education, an analysis of curricular offerings of several independent liberal arts colleges, and others that were either developmental or studies of development.

College attendance and retention. College attendance and retention have been given considerable attention by researchers. Three recently contracted studies are

deserving of special mention: McConnell is attempting to determine the factors affecting performance of transferred students from two- to four-year colleges with implications for coordination and articulation; Rossi is studying the career plans and aspirations of 1961 college graduates; and Tucker is studying attrition among doctoral candidates.

Student characteristics. Research projects investigating the characteristics of college students have focused on critical thinking, attitudes, and values. Motivational and personality factors associated with obtaining a college education and selecting a career have also been subjects of research interest. O'Dowd and Beardslee, in a recently contracted project, are studying the development and consistency of student images of occupations.

Institutional characteristics. Studies of institutional characteristics have dealt largely with the nature of the institutions and their impact on the students.

The remaining three areas—*administration and public policy, educational achievement of students,* and *faculty*—have been given little attention.

The studies selected for this report represent an outlay of approximately $379,000 for completed projects and approximately $9 million in obligated funds for uncompleted projects.

J. KENNETH LITTLE
Director, Survey of Federal Programs in Higher Education
Office of Education
U.S. Department of Health, Education, and Welfare

THE NATIONAL DEFENSE EDUCATION ACT directs the Secretary of Health, Education, and Welfare to secure full information about all federally sponsored educational programs in which colleges and universities are utilized. This study now yields the following major high lights:

Between thirty-five and forty different administrative units of federal departments or agencies sponsor programs of 1) research; 2) specialized training; 3) fellowships or other student financial assistance; or 4) loans or grants for equipment or construction of facilities. The number of institutions of higher education which participate ranges from more than 1400 in the NDEA Student Loan Program to about 450 which are used in research programs.

Most of the federal funds are concentrated in research and graduate education. Comparatively small, but not insignificant, amounts go to undergraduate colleges. The total amount expended for all types of federally sponsored programs in colleges and universities now approximates $1.5 billion annually. This amount includes government-owned research centers and overseas programs which are operated by American universities. A very high percentage of these funds is expended in fewer than 100 institutions. In 1957-58, all but three states had at least one college or university which reported $1 million or more in

federal income. In 1960, it is probable that all fifty states had one such institution. Practically all federal programs require outlays of time, space, and financial resources from participating institutions.

Colleges and universities, participating faculty members, and government advisory groups generally agree that federal programs have been basically beneficial. Some argue that federal assistance is indispensable to meeting the requirements of the foreseeable future. Major problems and concerns center around: 1) finding staff and resources to meet demands for increased specialized service in the face of rapidly growing student enrollments; 2) finding equivalent support for fields of study which fall outside the present missions of federal agencies; 3) developing more centers of strength for basic research and graduate education; 4) providing greater flexibility in the institutions' use of funds; 5) maintaining and strengthening quality of instruction in all types of institutions; 6) reducing complexity and cost of institutional administration of programs; 7) securing adequate voice and representation in the formulation of federal programs and policies; 8) increasing quality of programs and capacity for effective participation in educational programs for other countries; 9) preserving and stimulating a broad and diverse base of support for colleges and universities; 10) safeguarding the basic independence of institutions of higher education in a free society.

ALLAN O. PFNISTER
Visiting Professor of Higher Education
The University of Michigan and Carnegie Center
for the Study of Higher Education

A STUDY CARRIED ON at the Center for the Study of Higher Education at the University of Michigan seeks to provide insight into the academic origins, and more specifically, the baccalaureate origins of the faculty member. This study involves an analysis of the academic histories of over 19,000 faculty members teaching in 255 representative American liberal arts colleges, teachers colleges, junior colleges, and the liberal arts and/or education faculties of twenty-nine representative American universities during the academic year 1955-56.

Because enrollments are concentrated in a relatively few major institutions it was not surprising to find that the majority of the 1955 college teachers had received their baccalaureate degrees from a limited number of institutions. The study shows that excluding faculty teaching on the staffs of their alma maters, one-fourth of the teachers in the sample received baccalaureate degrees from sixteen major institutions. Over half of the teachers received baccalaureate degrees from sixty-nine institutions.

When all of the institutions producing teachers for the 284 institutions in the sample were ordered according to the gross number of teachers provided, the top five—the University of California, Harvard University, the University of

Chicago, Columbia University, and the University of Wisconsin—had among themselves one or more graduates on all of the university faculties in the sample, on almost seventy-five per cent of the liberal arts college faculties, on eighty-eight per cent of the teachers college faculties, and on forty-eight per cent of the junior college faculties.

With respect to the degree of in-breeding among institutions, it was found that approximately eighteen per cent of the faculty were employed in the same institutions as those from which they had received their baccalaureate degrees. If teachers in junior colleges are excluded, somewhat over twenty-one per cent of the teachers in the sample were teaching in their alma maters. In terms of legal control, over forty per cent of the faculty members in thirty-one Roman Catholic senior colleges were teaching in their alma maters. On the other hand, only 16.8 per cent of the faculty members teaching in the sixty-five public colleges were teaching in their alma maters. The proportions for forty-two private, nondenominational colleges and forty-five Protestant institutions were, respectively, 16.9 per cent and twenty-six per cent.

The study was originated by the Commission on Teacher Education of the Association of American Colleges, and the initial design was developed by Frank R. Kille, at the time dean of Carleton College, and now Associate Commissioner for Higher Education of the State of New York.

FELIX C. ROBB
Chief of Staff, Study of the College and University Presidency
Dean of Instruction
George Peabody College

THE STUDY OF THE COLLEGE and University Presidency is a project in academic governance with a central focus upon the office of the president. The study, supported by the Carnegie Foundation for the Advancement of Teaching, is directed by President Emeritus Harold W. Dodds of Princeton. The presidency study has been conducted by employing observations and semistructured interviews of presidents, trustees, deans, faculty members, and students. The staff visited some fifty universities and colleges, most of them in the front rank and characterized by marked development in the post-World War II period. Our report will be published in late 1961 or early 1962, probably under the title, *The College and University President at Work*.

Our published report will cover these areas: 1) the unique nature of colleges and universities as social institutions and as problems in governance; 2) educational leadership, including measures of success; 3) administration as a launching platform for presidential aspiration; 4) the consultative process as a means to conserve time, achieve integration of divergent views, and maintain faculty morale; 5) the chief executive's role in the supporting activities; 6) the

president at work with the faculty; 7) the president at work with his trustees; and 8) how to select a president.

The central problem of the study became this: Can the president hereafter be expected to be an educational leader and still find time for the housekeeping he thinks he has to do, wants to do, or which his constituents think he must do? We conclude affirmatively, but the cure is neither simple nor easy. Essential to the restoration of the presidency to a strong educational role is a large increase in the practice of delegating the conduct of supporting activities to others. The identification of conditions under which this can be accomplished constitutes an important aspect of the book.

We reject the bifurcation of the president's office as a solution and place special emphasis on the importance of the president's personal and consuming commitment to education. We conclude that he must be actively involved at vital points in the process of producing the institution's end product. We puncture the fallacy that a president can, or has to, develop expertise in many fields. We also reject the idea that he must gain his intellectual satisfactions from a prolonged identification with his old field of personal scholarship.

We show how presidents err when they purposely choose weak deans or severely restrict the authority of strong ones. We examine the president's relation to informal power centers, which he cannot afford to neglect. We find that most institutions which are developing in size and complexity are understaffed—contrary to popular opinions—having outgrown their administrative britches. The need for more talent in subordinate administrative posts is apparent.

The control of higher education by lay boards gets careful scrutiny. We conclude that the informed, able trustee is becoming more common in pacesetting institutions, while the inactive, honorific, self-aggrandizing, or intellectually inadequate trustee continues to be a fundamental problem in some colleges and universities. Generally speaking, we find that trustees are abler and more willing than some presidents give them credit for being. We make the case for presidents presiding at board meetings. We find faculty representation on boards of trustees to be of little value but propose other means for bridging the chasm between the faculty and the board.

NOTE: Chairman of this information session was LYLE W. ASHBY, Deputy Executive Secretary, National Education Association.

Compensation on the Campus, Direct and Indirect

J. FLETCHER WELLEMEYER
AHE Salary Project Director
Consultant on Higher Education and Highly Trained Personnel

THE STUDIES MAKING UP the Association for Higher Education report, *Compensation on the Campus,* came about as a result of a grant from the National Education Association to the AHE which was later supplemented by a grant from the U. S. Steel Educational Foundation.

Since this was to be a onetime study it was eventually decided that a series of case reports on compensation policies and procedures of institutions of different kinds would be most useful. This approach was approved by the association directors and ultimately fourteen institutions agreed to cooperate. They are: Brooklyn College, Colorado College, Franklin and Marshall College, Grinnell College, Montclair State College, Morgan State College, Mount Holyoke College, St. Olaf College, San Francisco State College, Southern Connecticut College, Stanford University, University of Kentucky, University of North Carolina, and the University of Oregon.

In each case someone on the campus undertook to do the study and a planning meeting of these analysts was held in Washington at the end of April 1960. The finished reports came in during the following summer and were edited for publication. They also formed the basis for a summary chapter.

The institutions included in the report are in general those which have some practices considered worthy of emulation. The reports do not reflect the very highest salary levels, although some very good salaries are reported. They do, however, record a rich variety of personnel practices associated with the compensation question. The reports deal with recruitment and hiring procedures, with promotion arrangements, including the problem of evaluating teaching and research performance, and with retirement, insurance, and medical care. In addition, a lengthy list of supplementary or fringe benefits was mentioned. These include:

1. Tuition waivers and grants for faculty children, a common provision at the private institutions.
2. Various kinds of formal and informal provisions for sick leave.
3. Medical care provisions including not only Blue Cross and Blue Shield, but in two cases a comprehensive program of family medical care.
4. Insurance for major medical expenses, which is now available at four of these institutions and being planned at two more.
5. Institutional policies with respect to the use of outside grants for research and other purposes are described.
6. The granting of leave without compensation for various purposes of study and research is usually approved.
7. In a few cases salary has been paid to young instructors seeking to com-

plete their doctorates. The institution exercises a moral pressure on the instructor to come back for at least a brief period.

8. Administrative attitudes toward Fulbright and Smith-Mundt grants are also usually enthusiastic.

9. All but two of these institutions have some provision for sabbatical leave. The usual formula is to provide a year at half pay, or a semester at full pay.

10. Some institutions provide small grants for the costs of research, including amounts needed for the purchase of equipment, microfilming, typing of manuscripts, hiring of part-time assistants, etc. These provisions are extremely popular with faculty, and a relatively small appropriation goes a long way.

11. This study has indicated a widespread shortage of office space for faculty members. The increase in college faculty has not been accompanied by an increase in office space.

12. Available funds for travel to professional meetings are in most cases quite limited. The California state legislature seems particularly niggardly on this subject. In general, the private institutions are more generous than the public.

13. Summer work in teaching and research is usually not available in sufficient volume to provide for all who want it.

14. Other benefits include supplementary stipends for retired professors whose annuities are no longer adequate; grants toward moving expenses; free or reduced admissions to concerts, lectures, and other college functions; athletic and recreational facilities; institutional help in buying at reduced prices; maternity leave; emergency loans; secretarial help; and occasionally special provisions for assistance in housing.

MARGERY S. FOSTER
Secretary of the College and Lecturer in Economics
Mount Holyoke College

MOUNT HOLYOKE COLLEGE is a privately financed nondenominational liberal arts college for women. The budgeted full-time active teaching faculty in 1960-61 numbers 128, of whom forty-four per cent are men and fifty-six per cent are women. There are also forty part-time faculty members. The faculty is selected on the basis of both teaching ability and other professional competence evidenced by successful research and publication.

At Mount Holyoke, it is the responsibility of the president of the college to recommend individual salaries to the education committee of the board of trustees, which in turn recommends them to the full board for approval. There has been an average of eight per cent increase in salaries each year over the last five years.

In addition to salary, over fourteen per cent of the faculty salary budget is now paid by the college for various personal fringe benefits. First and clearly most important is participation in a *retirement plan,* required of all full-time persons of professorial rank, in which each person who participates contributes not less than six per cent of his basic salary and the college con-

tributes eight per cent of the basic salary. *Sabbatical leaves* of absence are granted, though not guaranteed, faculty of professorial rank who have taught in the college at least six years. Daughters of faculty members who qualify for admission may attend Mount Holyoke without paying tuition; the college pays up to $700 toward the tuition of *faculty children* attending other institutions. *Housing* has been difficult to find; the college has housing units (somewhat subsidized) which it rents to faculty members and staff. It also has a generous mortgage plan.

Every full-time teaching faculty member who wishes it has either a private office or a private study available in the library. Some faculty members have both private studies and a share in an office for two.

Membership on the faculty at Mount Holyoke College is understood to be a full-time position. Therefore the college does not look with favor on continued *employment of its faculty elsewhere* during the college year.

In respect to *academic freedom and tenure*, the policy of Mount Holyoke College is in general accord with the statements of the policy of the AAUP and the Association of American Colleges.

RAYMOND C. LEWIN
Assistant Professor of Education
Montclair State College

ANY DISCUSSION ON SALARY PRACTICES must take into account the whole host of factors that go into the making up of a faculty member's "salary." A realistic approach to this topic demands that we treat with fairness the other areas of compensation which are provided us—some, indeed, which result simply because we are college faculty. This broader view would define compensation as money, as protection and security, as anticipated income, as fringe benefits, as time, and as morale. Many faculty members receive the compensatory balm of the first four of these as a general college (or state) pattern and the last two as the individual institution is so constituted. For most, money means salary plus an additional (and sometimes substantial) sum paid by the college (or state) toward pension, life insurance, and social security; protection and security are to be found in the tenure and pension systems; anticipated income is embodied in the movement through a salary schedule, at least for most state college and university people; and the fringe supplements such as cumulative sick leave, sabbatical leave, workman's compensation, low-cost insurance, low-interest loan possibilities, paid participation in professional meetings, and others similar are present and ever increasing.

The two most independent compensation factors—time and morale—are difficult to measure, yet the impact of their presence or absence figures strongly in any analysis of the adequacy of compensation. Time can be described as time to travel, to think, to plan, to recreate, to study, to research, and to enjoy the tempo of the campus. Morale is all that has been said thus far plus a working

(administrative) atmosphere which fosters a sense of accomplishment in an effort jointly conceived and carried on. Implicit in time and morale is the whole world of compensation which accrues for many college faculty people out of consultancies, writings, speaking engagements, research, and guest teaching "simply because we are college faculty."

This realistic look also leads to the curious fact that, as Ruth Eckert has said, "most college teachers would choose the same vocation, given an opportunity to remake their decision." This seems to indicate the wisdom of the broader view on our part toward what must be, to say the least, adequacy in the compensation arrangements on many campuses. It would seem that the responsible approach toward future faculty compensation lies in our acceptance of certain practices as compensation rather than as the expected legacy of a college faculty member.

WALTER H. MAIS
Dean of Faculty and Professor of Physics
Brooklyn College

BROOKLYN COLLEGE, founded in 1930, is a four-year liberal arts college under the direction of the Board of Higher Education of the City of New York. Since 1938, the college has operated under a set of bylaws which are fundamentally democratic in nature and which assign considerable power to the faculty. For example, appointments and tenure and promotion recommendations are ordinarily initiated in the individual instructional departments by an elected committee on appointments.

New appointees are on a probationary basis for a three-year period and are ordinarily not granted tenure until they start their fourth full year of service. During the probationary period, the department is expected to assess the candidate for tenure more or less continuously. The evaluation includes, among other things, teaching effectiveness based on observation in the classroom by several members of the department, relations with students and colleagues, and professional and creative contributions. There is a similar involvement of faculty each year in connection with promotion recommendations and decisions.

Salaries paid to faculty members are a matter of record and are published by the City of New York. Salary scales for the different ranks overlap, and a staff member moves automatically from one step of a given scale to the next each year until he attains the maximum or is promoted to a higher rank. A major problem relating to faculty salaries stems from the fact that we operate under the rigidities of a line budget. Faculty members receive retirement allowances which consist of a pension which comes from contributions by the city and an annuity which comes from contributions by the teacher. A teacher is eligible for regular service retirement after thirty-five years of service, or at age fifty-five if he has thirty years of service, or at age sixty-five for any number of years of service. There are two medical care programs on campus. One plan is the Blue Cross–Blue Shield program. The second is the Health Insurance Plan

of the City of New York. This is a comprehensive medical, surgical, and hospital care program underwritten by the City for its employees. The City pays one-half of the "base income" premium rate. Faculty members are permitted to work during the summer session for extra compensation and may also be employed in the evening division of the college but only for a limited number of hours.

One problem which is currently of some concern and which could become serious in the next few years is the increasing difficulty we are encountering in locating well-qualified teachers in some disciplines. This is aggravated by the fact that we have a fifteen-hour teaching program and that the Ph.D. is required in most departments for appointment as an instructor. Proposals to increase the probationary period from three years to five years would permit better evaluation of probationers, but might also make it more difficult to compete in the market place.

NOTE: *Compensation on the Campus,* a 550-page full report of the AHE salary study, is available at AHE headquarters, 1201 Sixteenth Street, N.W., Washington 6, D.C. It is $2 to AHE members, $3 to nonmembers. J. F. WELLEMEYER, AHE Salary Project Director, served as chairman of this information session.

Patterns of Representative Programs in General Education: Colgate University, California Colleges, University of South Florida, Stephens College, Goddard College, and Monteith College

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WENDELL H. BASH
Professor of Sociology and Chairman of the Department
Colgate University

AT COLGATE the Core Curriculum is the chief means of general education. Prescribed for all students, the core courses are both introductory and terminal. The director of each one of these courses has written a brief description of the course. Following are a few sentences from each of these reports.

Natural science. The aim of this course is to enlarge our students' view of science, to help them appreciate not only that science more fundamentally is an activity or enterprise, but also to understand something of the nature of that enterprise. To accomplish these objectives the material of the course is organized around scientific problems. Some of these are unsolved and under active study; others have been solved but the students are asked to approach them *de novo* to see how a solution might be worked out today.

Philosophy and religion. This course aims to introduce our freshmen to disciplined thinking in philosophy and religion through intensive study of some of the basic issues which have perennially confronted thoughtful men. We turn in part two to a consideration of the ways in which some of our great spiritual forebears conceived man's nature and responsibilities. In part three we present a series of contemporary discussions of them which are in conspicuous contrast with each other.

Music and the visual arts. The student is encouraged to participate, both emotionally and intellectually, in the art experience, and to enjoy it as he discovers his ability to participate in this experience as an informed, responsive, and responsible person.

Literature. The objectives of this course are twofold: to introduce students to a critical examination of literature as an embodiment of mature human wisdom and values, and to train them to read literature as an *art.*

Communication. The course has four aims: 1) to improve skills in rational communication through practice in speaking and writing; 2) to develop habits of careful preparation, self-criticism, and revision; 3) to provide training in the use of supporting materials, and of logic in argument and organization; and 4) to cultivate awareness of communication as a social process, the symbolic nature of language, and the importance of grammar, good usage, audience adaptation, and social responsibility in all communication.

Areas studies. This involves an intensive one-semester study of a selected foreign area. The focus upon *one* area diminishes the danger of a superficial "tour."

American ideals and institutions. This full-year course required of all juniors should be viewed as one half of the total upperclass core program. The object of study for the student includes those ideals that have been important in the tradition of Western democracy. The first semester is largely historical; the second semester largely contemporaneous.

America in the world community. As the capstone of the four-semester upperclass core sequence, this course has two primary objectives: 1) to focus attention upon the complexities, the ramifications, and full implications of America's world-wide relationships and responsibilities, and 2) to provide seniors with increased opportunity for self-directed study.

JAMES W. BROWN
Dean
Graduate Division
San Jose State College

THE FUNDAMENTAL FACT about general education in California is its extreme diversity. Three segments of public higher education function independently, so far as general education is concerned. Yet every institution receives students from and prepares students for transfer to the other two segments. Because of this constant flux there is some attempt by all institutions to achieve a "greatest common denominator" among commonly required courses, such as those for general education. Thus it is hoped that the credit will be acceptable in the other colleges and that the work of their own institutions will be equated with course credits brought to them by incoming transfer students.

Every California institution of higher learning has a positive belief in and commitment to the idea and practice of general education. The University requires *breadth of exposure* to general education through a sampling of existing and traditional courses in English and foreign languages, humanities, social sciences, and natural sciences. In the state colleges, forty-five semester units in general education are required. Experimental approaches to ways of satisfying this requirement are being developed, with many exceptionally promising prospects (such as the Humanities Program at San Jose State College). In the junior colleges, it is generally true that the requirements of the University and of the state colleges constrain them to offer courses which are "parallel" to those of receiving institutions. But, again, some of the able junior college faculties have developed attractive integrated offerings in general education.

The Humanities Program at San Jose State College is one example of the functional adaptation of regulations for meeting general education require-

ments in California state colleges. The San Jose program is organized as a four-course program, of five units each, intended to be taken in succeeding semesters of freshmen and sophomore years. Enrollment is both invitational and voluntary.

The four courses of the program (twenty semester units in all) satisfy total general education requirements in: 1) social sciences, including state requirements in U.S. Constitution; 2) literature, philosophy, and the arts; 3) oral and written communications.

The purposes of the sequence are "to provide an integrated survey of Western culture from its beginnings in ancient Greece to the present." It attempts in two years to "give students an overview of the intellectual achievement of the West." Written composition and oral discussion are essential in each course. Each student is required to write a minimum of 4500 words a semester, exclusive of the final examination. At least six papers are required each semester, some of them to be written in class. Writing assignments are based primarily upon critiques and interpretations of materials read for the course.

Readings are drawn almost exclusively from primary sources. Presentations of course content are historical and chronological, rather than psychological. Because discussion is additionally regarded as one means of satisfying two units of "speech credit," included with the twenty units total, each student is expected to participate actively in discussion and to prepare at least one oral report each semester.

Instruction of the course requires collaboration of specialists from several disciplines. There are currently twenty-two instructors for the twenty-two sections of the four courses in which 529 students are enrolled. The staff is divided into teams of four—one each from literature, social sciences, philosophy, and art. Each team has a chairman. All four instructors of the team attend each lecture, although the usual pattern is for one of the four to take charge of the complete class hour. The practice of rotating section leaders each semester allows each class, in the course of two years in the program, to be exposed to discussion leaders and lecturers with four different sets of values, standards, and subject matter orientations.

SIDNEY J. FRENCH
Dean, College of Basic Studies
University of South Florida

THE RATIONALE of the general education program at the University of South Florida is relatively simple. As stated in the first *University Bulletin*, it is "to provide that part of each student's education which seeks to improve his general intellectual skills and provide some understanding of the principal areas of human achievement—in the arts and humanities, the social sciences, and the natural sciences and mathematics. These are the skills and the areas of broad

knowledge which should be held in common by all educated people whatever their fields of specialization may be; they form our common cultural heritage."

Since a considerable number of students never complete their baccalaureate education, it seemed desirable to concentrate most of our general education program in the first two years. Seven full-year lower division courses in basic studies have been designed. Each student must complete six of these or qualify for waiver. The courses are: Functional English—reading, writing, speaking, and listening; Functional Mathematics; Functional Foreign Languages—French, German, Russian, or Spanish; Problems in Natural Science—biological or physical; Human Behavior; The American Idea; The Humanities.

Students well prepared in one or more of these areas may qualify for waiver or, under certain conditions, for independent study and credit by examination. Starred sections are provided for able students and we are experimenting with team teaching. One unique feature is that each course includes a two-hour laboratory period. Another is the inclusion of foreign language in the program. From the first, evaluation has been an important aspect.

In addition to the lower division program, the College of Basic Studies will provide a required senior "capstone" course. Furthermore, it will offer, on an elective basis, an upper division program of integrated studies built upon the lower division program and leading, for those who select it, to a major in basic studies.

The College of Basic Studies is headed by a dean; each course is headed by a chairman responsible to the dean. The majority of the teaching faculty, however, hold joint appointments with liberal arts or one of the other areas. The Colleges of Basic Studies and Liberal Arts cooperate closely through a Joint College Council, with the two deans serving as cochairmen. By these means we hope to avoid some of the more vexing problems often encountered, such as isolation of the general education program on the one hand, and its dominance by liberal arts disciplines on the other.

RALPH C. LEYDEN
Director of Educational Development
Stephens College

AT STEPHENS COLLEGE a set of integrated core courses which provide the heart of general education is in process of both development and trial. These include courses presently titled Communication, Contemporary Social Issues, Basic Beliefs in Human Experience, General Humanities, Fundamentals of College Mathematics, and Introduction to Science Through Biology. Each of these draws upon several closely related disciplines. Together, they are intended to help the student acquire the knowledge and understanding which she will need, in common with others, to think critically and to make judgments useful in carrying out her responsibilities to herself and to the society of which she is a part.

The Stephens College House Plan is an exciting current experiment dealing with both method and content. Here, 100 students, all taking the same set of integrated courses taught by a team of five faculty members, live in one hall. The faculty have offices and conduct some classes in the hall. In this house plan setting the faculty are testing both the content of their courses and the effectiveness of different sets or patterns of general education courses. They are studying the ways in which learning can be both extended and intensified in such a living-learning situation.

Several projects involving closed-circuit television are seeking to determine the most effective use of that medium. In one course for all first-year students, TV programs, followed immediately by discussions in small groups, are presented by faculty members on such topics as Contemporary America, Women in the USA, The World Around Us, and The Individual. The use of TV is being tested within the communication course by the criterion: Can it be taught better by use of TV? TV, tape recorders, listening tables, viewing screens, and other automated devices are being tested to determine their value as learning aids during independent study.

The amplified telephone is being used in the classroom in several of the general education courses to carry on cross-country conversations with political leaders, literary figures, scientists, and philosophers. This method is employed to make possible a timeliness of content.

The Stephens program of general education has its roots in a long history of experimentation to evolve courses, methods, and conditions which foster the greatest growth possible for the student. It is today engaged in a vital program of re-examination, development, and experimentation to find better materials and methods for the general education, liberal, and specialized programs which the college offers.

ROYCE S. PITKIN
President
Goddard College

GODDARD IS a small, experimental, coeducational liberal arts college. To help students achieve and modify their objectives, Goddard offers opportunities for study in nine major areas: human behavior, societies, cultures, and languages, physical sciences and mathematics, biological sciences, the arts, education and community, American society, and English language studies.

With the aid of a faculty counselor, a student at the beginning of each semester selects from these areas subjects or problems for study that are calculated to help him achieve his purposes. These studies may be carried on in group courses—classes or independently. Ordinarily a student selects three subjects. As he begins his work he is expected to make a written statement of his objectives for each subject.

Group courses at the first year level meet twice a week, second to fourth year courses meet once a week, with a full half day available for each course. Halfway through the semester the student and his teacher confer to evaluate his progress and to discuss modification of his objectives. At the end of the semester each writes an evaluation. No use is made of marks, credits, or periodic examinations, other than such measures as the Graduate Record Examination and tests of critical thinking. There are no prescribed courses; instead, programs of study are planned individually in the light of a student's objectives and plans.

Students are expected to assume many adult responsibilities by participation in a campus daily work program, taking jobs away from the college during a two-month winter work term, serving on joint student-faculty committees to carry on the everyday affairs of the college community, incorporating in their study programs work with adults in off-campus projects such as community development, research on rural youth, serving as assistants in small public schools, and directing community theater productions.

Opportunities for understanding other cultures and peoples are provided through a comparative cultures program, which includes study of the French language and work in French Canada, courses in non-Western cultures, and a year of study abroad for some students.

Goddard regards books, films, records, television, and teaching machines not as ends but as resources for learning, to be used whenever there is need for the kind of information or experience they can supply. It believes that intellectual growth and character development are inseparable and that a proper concern of the college is to assist its students in the acquisition of self-knowledge and the consequent release of their creative and productive abilities for the attainment of their highest goals.

WOODBURN O. ROSS
Director, Monteith College
Wayne State University

MONTEITH IS A FOUR-YEAR, degree-granting general education college, one of the group of colleges which together make up Wayne State University. It offers degrees 1) to students who take its basic program (about forty-eight hours of work), including such elective courses as seem to the Monteith advisers to contribute to a coherent general education, and who write an elaborate senior essay; and 2) to students who take the basic program, write the essay, and specialize in some department of liberal arts or in a professional school. A Monteith student may take as few as half of his courses in Monteith and the remaining half in one or more of the other colleges of the university.

The basic program consists of the following: 1) a four-semester course in the natural sciences; 2) a three-semester course in the science of society; 3) a

three-semester course in humanistic studies; and 4) a two-semester senior colloquium. Each semester segment of each course carries four hours of credit toward graduation. All students in a basic course meet together twice a week to listen to lectures, and twice a week to participate in discussion groups. These groups number approximately twelve students each. The natural science course offers the student no formal laboratory experience. It is devoted principally to ideas and develops as a course in mathematics and the history and philosophy of science. Monteith offers advanced, interdisciplinary electives courses, besides its basic curriculum.

Although Monteith does restrict enrollment in order to avoid the evils of bigness, it is not an honors college. It attempts to admit a student body similar in nature to that of the entire university, and to this end establishes certain admission quotas. Until the quota to which he belongs is filled, any person who is admissible to the university is admissible to Monteith.

The college maintains its own student center, in the hope of encouraging its students in the intellectual life. (This center may prove to be one of the most significant features of the Monteith program.)

While the college provides highly individualized instruction to freshmen, it deliberately seeks to train its students in habits of independent study. Gradually, as the students progress toward graduation, it withdraws instructional support from them. For instance, each student is required to take the final segment of the natural science, social science, or humanistic studies basic course without attending section meetings. The student may choose which course he completes in this fashion. No courses in English composition, speech, or communication in general are offered. Instead, each faculty member is made responsible for improving his students' use of language. A great deal of writing is required.

The college exists by virtue of a substantial grant from the Ford Foundation.

NOTE: Chairman of this information session was WALDO W. E. BLANCHET, Dean, Fort Valley State College.

Summary of Recent Studies Relating to Educational Exchange

DONALD B. COOK
Director
Office of Educational Exchange
U.S. Department of State

THE RECENT MAJOR TASK FORCE and committee reports relating to the government's educational and cultural program all agree on two significant points; namely, that the exchange program is of vital im- ., out that it now lacks certain basic elements. Most of the studies re..mmended changes in the organization and some suggested the establishment of a new organization; several outlined specific improvements and activities that should be undertaken and described the role of the university in the program; some touched on the establishment of a Peace Corps. I am going to discuss these studies individually in the approximate order in which they were submitted.

The university and world affairs. The Committee on the University and World Affairs, created in July 1959, at the request of the Department of State, was financed by the Ford Foundation. The nine-member committee, under the chairmanship of J. L. Morrill, formerly president of the University of Minnesota, was representative of education, industry, government, and the foundations.

The report of the committee, which was released in December 1960, makes a number of recommendations. Running through its entirety are two or three strong central themes. It repeatedly stresses the need for greater emphasis in America on studies of world affairs. It emphasizes the necessity of financial support for university and college programs coupled with maximum autonomy for these institutions in their international undertakings. It particularly stresses the need for long-term financing to permit long-term planning and operations. It further notes the desirability of bringing American educational institutions into the initial stages of national planning for education and world affairs.

The college and university in international affairs. At the annual meeting of the officers and trustees of the Carnegie Foundation in November 1959, it was recognized that the perils and dilemmas of international affairs overshadow every other problem we face as a nation. The discussion on that occasion as to what colleges and universities are doing on this most important of all fronts was summarized for the foundation's annual report and recently reprinted in a pamphlet entitled, "The College and University in International Affairs." It states among other things that if the university is to do an adequate job in international relations, a greater share of both faculty and student time would have to be allotted to this purpose. It is an informal account of an important issue, but was not published as the consensus of those present.

The President's committee on information activities abroad. President Eisen-

hower's Committee on Information Activities Abroad, composed of a group of government experts, was organized in December 1959, under the chairmanship of the distinguished attorney, Mansfield D. Sprague. The committee made a broad study of our information system and of the cultural and educational exchange programs, which was submitted to the President in December 1960. It emphasized the values in the programs of exchange of persons and recommended that they be expanded, particularly with African countries.

Report of the task force on exchange of persons. The Task Force on Exchange of Persons, appointed by President-elect Kennedy, submitted its report on January 5, 1961. This group, composed of six educators, served under the chairmanship of James M. Davis, director of the International Center of the University of Michigan and president of the National Association of Foreign Student Advisers. The report recommended an under secretary of state for educational and cultural affairs, and called for federal legislation authorizing matching grants to universities for counseling, orientation, language training and other services to foreign students and visitors.

A report to the President of the United States. The Fourth National Conference on Exchange of Persons, sponsored by the Institute of International Education, met in San Francisco in December 1960 to discuss educational exchange for the mutual development of nations. The 800 conference delegates—American and foreign—representing several hundred educational, business, and civic organizations and the government, took part in the discussion. Some high lights of the report which was submitted to the President, include a plea for a total and imaginative program of international educational development, and for a massive shift of emphasis, dollars, and people into the effort.

The sixteenth report of the United States Advisory Commission on Information. The U.S. Advisory Commission on Information, in its Sixteenth Report to Congress, points out the "new dimensions of diplomacy" of the last fifteen years, during which the traditional methods of conducting relations between governments have been supplemented by ways of appealing directly to the people of foreign countries. The commission considers that the U.S. foreign information program has four functions: 1) to counsel the executive branch on international public opinion; 2) to interpret to people overseas the purpose of U.S. foreign policy; 3) to serve abroad as a source of accurate news of the United States; and 4) to present the full sweep of American life to the people of the world.

Laves report. Walter H. C. Laves, professor of government at Indiana University, has completed a study entitled *A Survey of United States Government Policy and Programs on Education, Science, Culture, Technical Assistance and Information.* This study was made at the request of the United States Advisory Commission on Educational Exchange. It enjoys a special place among the several studies because it came last and Mr. Laves was able to draw on and benefit by the several others that were completed earlier. Many of the recommendations mentioned above are repeated in this study.

Brookings Institution study of the foreign leader program. The Department of State requested the Brookings Institution to undertake, under contract, an evaluation of the effectiveness of the operation of its Foreign Leader Program. The study, restricted to the operation of the Leader Program *in the United States,*

was conducted by Robert E. Elder of Colgate University, detailed to the Brookings staff.

NOTE: Chairman of this information session was BUELL G. GALLAGHER, President, City College, College of the City of New York.

Establishing Systems Whereby Institutions Can Teach More Students Faster and More Efficiently

ARMAND L. HUNTER
Director
Division of Broadcasting Services
Michigan State University

THE THREE BASIC and nontechnical obstacles to the acceptance of technology in education and the "systems" approach which we find are: the "good reasons for doing nothing"; the analogical terms and arguments borrowed from industry; and the identification of professional media people with methods, devices, and teaching aids.

Edgar Dale has listed seven of the "good reasons for doing nothing": The proposal would set a precedent, or there is no precedent to guide us. We have not yet conclusively proved that the old method can't be made to work, or that the proposed new one can. It's just another fad. The time is not ripe. The situation is hopeless. We can't afford it. It is controversial.

Any technological development in education will have to overcome the resistance of these "apparent reasons."

The obstacle of terms and arguments from industry represents the semantic problem of the language of industry which has been borrowed to describe and define the application of technology to the process of education. This argument by analogy, which relates mass production to mass media, increased output to improvement in learning, and lower cost per unit to qualitative performance, must be avoided and resolved through the use of terms that have recognized educational value meanings. The third obstacle is the tendency of the professional communication specialists to become identified as "gadgeteers," technicians, and methods centered. This preoccupation with methods and means cuts the expert off from purposes and ends. If we are to overcome this obstacle, the professional media specialists must become identified with accepted educational values and objectives, or be reduced to second-class educational citizenship.

Whitehead has said that "the task of a University is the creation of the future"; also that "the University imparts information, but it imparts it imaginatively." Therefore, the new media and technology should be employed in the imparting of information in the most creative, imaginative, and stimulating way possible. The question then becomes one of how this can be done. One answer, of course, is the "systems" plan of determining the nature and purpose of the particular educational and learning experience, and then of determining the selection and design of those instructional and learning resources which alone, or in combination, would produce the desired results. This creative "programmed" use of technological resources, with their imaginative applica-

tion within the learning experience, should provide a stimulating communication of information, and thus result in its finding a sound and proper place within the educational system. On this basis, the question now becomes one of a method by which this might be implemented within the educational institution.

First, we need the device of an administrative structure. This could be provided through the establishment of what might be called a "Learning and Instructional Resources Center." This Center would encompass the whole communications and technological complex devoted to the teaching-learning process: library, instructional radio and television, film, graphics, audio and visual aids, language laboratories, and teaching machines. It would provide a professional and technical staff for the operation of these services. It would provide an academic staff for instruction, and for consultation with the teaching faculty. It would serve as a clearinghouse for research in the communications media. It would conduct and foster research in new technological developments. And, it would provide the planning and evaluation required by the creative "programming" demand of the "systems" concept and design.

In order to carry out all these functions and services, the Center ideally would require a special building and extensive physical facilities, including closed-circuit radio and television production and recording studios; film production and recording studios; graphic, photographic, and printing facilities; film, kinescope, video and audio tape library and storage facilities; language laboratories; self-instructional materials and devices; research and design laboratories incorporating new technological developments; and a campus-wide communications and distribution system.

HARRY J. SKORNIA
Associate Professor of Radio and Television
University of Illinois
Immediate Past President
National Association of Educational Broadcasters

IN AN AGE WHEN THE ENTIRE GLOBE may be brainwashed by communications based on satellites in space, the time has come to abandon all too prevalent anachronistic concepts of what new electronic media can and must do for education. History will show that in uses we now boast of, regarding educational television, we are missing the unique opportunities which the nature of television (in balanced use with other media) makes possible.

If we take a medium whose greatest power is immediacy, and condemn it to re-use of stale materials from the film, print, graphics, and other fields; if we take a pipeline that *could* provide distribution for the intellectual life's blood necessary to create One World—and condemn it, like a waiter, to "serving" stale curricular and course materials, long outmoded, we are destroying our own

prospects of progress. We are also condemning the new media to uses for which they may be only semiqualified. Educational television should not be used primarily to save time, money, space, or teachers. Educational television is not merely a new way of delivering print-based "material"; it is a new social and educational force in which shapes, colors, movement, and rhythm reduce the role of language, the word, print, and the teacher in a manner which requires profound understanding. The "unskilled practitioners" who have in some instances, with outside support, taken over the direction setting of television as educational instruments may well be doing irreparable harm to what could be nobler uses on behalf of unselfish efforts in the service of all humanity.

Much of what present adults learned in schools and colleges, we now know, were lies. The stale knowledge we are trying to cram into resistant young craniums needs replacement by education seen as the learning of the art of the acquisition, identification, recognition, and utilization of knowledge. Education is now a lifelong responsibility for which formal education must prepare us. "Terminal" education in any field is a thing of the past. In television, too, we have an instrument which can help raise the temperature of education to make it challenging, exciting, and dynamic again—replacing the boring rote and fact recital which education all too often is. Television's role, like that of the great university, should be to awaken, to challenge, to provide ferment—a hothouse for new and radical ideals.

Finally, television cannot make learning cheap and easy because education itself is largely discipline and habit—a patient, continuous, exacting process of self-realization. The human and intellectual and spiritual resources we need are at hand. So are the media necessary to bring them to every man in our nation—and eventually the world. Let us use such new media, then, for the noble and challenging uses which survival demands rather than for the menial and fractionalized tasks now so characteristic of educational television and other "new" media uses.

W. A. WITTICH
Professor of Education
The University of Wisconsin

IT IS ANTICIPATED that through the means of television and central correspondence type tutorial services, one competent instructor could assume TV teaching responsibility in such basic freshman and sophomore subject areas as mathematics, social studies, English, or foreign languages.

The instructor would work with a team of writers, editors, and television producers to create a series of three basic lectures per week, an accompanying study manual which outlines work-study procedures, written laboratory assignments, and required reading lists.

Instruction would include half-hour lecture demonstrations followed by twenty-minute discussion-feedback two-way communications between selected groups of student participants and the television instructor. In addition, written "feedback" assignments would be submitted by participating students and sent in to a central tutorial correspondence study center for evaluation.

It is further suggested that specialized techniques be used as a basis for student admission to the program and that standardized tests be used as one measure for the granting of credit at the end of the course experience. Special admission screening tests would be used to predict the compatibility of the student with the unique tasks involved in this type of TV study: televiewing, initiative, self-study, original writing of assignments, etc.

The Chicago Junior College research among carefully chosen young adults indicates that those students who are screened on the basis of their ability to do self-initiating kinds of TV learning activities, can accomplish traditional junior college academic work to a level superior to that currently being accomplished by control groups taking instruction through traditional means.

The Wisconsin Physics Film Project reveals that if careful screening of candidates is pursued, these people can accomplish an above-average level of high school physics learning through the use of television kinescopes, written assignments, and assigned reading.

The Wisconsin Audio Visual Television Project has revealed definitely that teachers in training, regardless of their background other than their wish to participate in a carefully structured television instruction, which includes televiewing, written laboratory reports, and assigned reading, can accomplish at above-average levels the mastery of a professional in-service teacher training course.

Experiments during the last ten years in the Australian "Out-Back Radio School" reveal that a mastery of standard curriculum content can be accomplished by participating students pursuing instruction in their home living rooms.

NOTE: Chairman of this information session was CLIFFORD G. ERICKSON, Dean of TV Instruction, Chicago City Junior College. Mr. Wittich was unable to attend this session. His paper was presented by ROBERT KINDSCH, Research Assistant, The University of Wisconsin; and RICHARD D. CARLETON, Project Assistant, The University of Wisconsin.

The Wood Dynamic Reading Process

EVELYN N. WOOD
Assistant Professor of Reading
University of Delaware

THE AVERAGE ADULT reads no faster than he did in the fifth or sixth grade. He accelerated in high school and college and then fell back. After his schooling, lack of practice put him back in slow motion and he sauntered along in a comfortable rut. He will never learn to read fast, nor will he ever read much, until he changes his procedures.

The slow reader sees only one or two words at a time. The fast reader, reading by the Wood Method, is receptive to many words at a time. He feels and recognizes the ideas and concepts the words express or build, and reads like the wind in a moving fixation down the page. The author's thoughts flow to the reader's mind, and he feels as though he were thinking them. He sees material in the book or article as a whole, rather than as an accumulation of many small parts, each one cautiously, meticulously placed side by side, much as one fits a 500 piece jigsaw puzzle together. He sees the whole picture much as the author first conceived it. This broad view increases his understanding and enjoyment of reading, for having seen the whole, he is able to examine the parts in their proper relationships more intelligently.

Years ago, I was so frustrated by my own slow reading that I determined to teach myself to read faster and better and then, in time, to teach my high school students what I had learned to do for myself. I was fortunate in discovering some new techniques that have worked. My search for new ways to read began with the recognition of the fact that reading at lightning speeds is not unheard of. I began to search for fast readers and within a few years I was able to locate, time, and check for comprehension some fifty persons who could read from 1500 to 6000 words a minute with good comprehension. None of them had been officially trained to read fast. Of significance to me was the variation in occupation, age, and intellectual attainment of these fast readers. All of them read extensively, all of them enjoyed reading, and all of them were well informed. All of them read even difficult material at much faster rates than their colleagues. I observed that the techniques of fast readers were not the same as those of slow readers. I isolated the techniques of the fast readers and studied them. After five years of hard work I taught myself to read fast and was able to create exercises, develop techniques, and evolve materials that made it possible for me to teach others.

I didn't stop to argue if it were feasible for eyes to see as much as fast readers' eyes could see. I didn't stop to debate whether it was central or peripheral vision. I didn't stop to check if there were adequate tests to show the depth of comprehension or speed such reading could effect. All my students were reading fast, all of them were enjoying it, all of them were attaining very good compre-

hension, and none would have considered going back to the slow method of reading.

The Wood Method of reading is in no sense a substitute for the basic reading skills which have always been taught. I know of nothing that can take the place of word attack skills or getting the meaning from a sentence or paragraph. Without these skills there would be no rapid reading, for without them there would be no reading. When a person has learned the Wood Method and has mastered this skill, he will not merely read for the purpose of memorization and parroting back, but for understanding and assimilation of ideas.

The Wood Method requires constant and hard practice. It is not easy to learn. The student must practice until his body is doing its job habitually and automatically. The refinement comes only when the perception of large groups of words as thought patterns is automatic and instantaneous. It cannot be learned until the student has eliminated "chain reading."

Let me mention a few things that the Wood Method is not, as an introduction to what it is: 1) It is *not* a panacea for all reading problems nor is it a fly-by-night gimmick; 2) it is *not* a shallow surface skill, sacrificing the fundamental values of good reading for a flimsy lesser goal; and 3) it is *not* a course in skimming or scanning.

It *does* involve, first of all, moving the eyes quickly, smoothly, and easily down the page. Learning to read effectively down the page, especially on wide, involved pages, takes a great deal of directed practice and effort by the student and a great deal of expert instruction. The student must learn how to eliminate "chain reading," how to break up his regression pattern, and how to turn off his ears. He must also learn how to get comprehension without having to rely on subvocalization for reassurance that he has been able to get the meaning from the printed page. He cannot indulge in key word reading—for how will he know the real key words until he has read the complete material? Topic sentence reading is inaccurate and certainly not satisfactory. He has to be able to get the meaning from *all* the words; therefore, he must see them *all*. He has to be able to use his eyes and his mind, then he can move along as fast as he can see. This takes *all* his mind, and as he becomes efficient, outside noises do not disturb him. He "falls into the book."

There is no one method. Every student learns a different way, he has different problems, and different rates of learning to read. It takes many hours of practice, many hours of frustration to learn the new habits, and a mighty will to learn. It takes a skilled, well-trained teacher who understands the process, the learning needs, and who can read fast as the wind himself. Those who have mastered the skill themselves have contributed to the further growth of a breakthrough in reading which opens up new horizons.

NOTE: Chairman of this information session was LEWIS B. MAYHEW, Director, Office of Evaluation Services and Institutional Research, University of South Florida. Demonstrations of the Wood Dynamic Reading Process were given by LAWRENCE DARBY, Student, Leland Junior High School, Chevy Chase, Maryland; ROBERT DARLING, Student, Mt. Pleasant High School, Wilmington, Delaware; and JUDY LEFKOWITZ, U.S. Department of the Interior, and Recent Graduate, George Washington University.

The Future Role of the East-West Center in Hawaii

MURRAY TURNBULL
Interim Director, East-West Center
University of Hawaii

THE CONGRESS, in the Mutual Security Act of 1960, authorized the establishment of a Center for Cultural and Technical Interchange between East and West in Hawaii, and subsequently appropriated $10 million for the first year of operation. On the 25th of October 1960, the Department of State signed an agreement with the University of Hawaii to enable the university to establish, staff, operate, and administer the Center as an integral part of the university.

The Center is based upon extensive plans prepared by the university and has as its primary objective the increase of mutual understanding between the peoples of Asia, the Pacific Area, and the United States. This is to be effected through two primary groups: one, consisting of young people of high intellectual ability who possess leadership potentialities; and two, those mature men and women who are already making significant contributions to their communities in various fields.

The Center consists of two principal units. The first constitutes an on-the-job or in-service training agency to make it possible to conduct an extensive series of technical training programs in the industries and governmental agencies of the state. Most of these programs are financed through ICA, UNESCO, WHO, and similar organizations. The second branch of the Center consists of a series of programs and services for students, scholars, and leaders of various kinds. The International College enables the administration of scholarship grants for students from Asia to undertake studies in the regular courses of the university for which they are fitted and includes transportation, housing, feeding, books, tuition, and a summer or semester study tour on the mainland of the United States.

Programs are planned to handle 2000 scholarship students by 1966. All such students will enroll in regular programs of the university. Supporting services include an English language training institute, an American studies institute, and a counseling service in the offices of the foreign student adviser.

An Institute of Advanced Projects has been organized to administer an extensive series of grants to senior scholars and individuals for special research, conferences, and other such meetings to provide for the exchange of information and ideas.

In addition to the facilities of the university and the skills of its faculty, the state of Hawaii has provided $750,000 for the construction of a dormitory facility, some twenty-one acres of land, valued at approximately $3 million, and the extensive resources of a community of people incorporating a wide variety of racial, national, and ethnic backgrounds. A portion of the federal appropriation will be used to augment the facilities and programs of the university and

will include a series of additions to the physical plant of the institution, including dormitories, food facilities, seminar rooms, and various classrooms and laboratory structures.

National and international advisory boards are being established to enable the Center to encourage and solicit mutual cooperation and participation of other American as well as Asian institutions.

NOTE: Panelists for this information session were CHARLES S. BOUSLOG, Acting Director, Institute of American Studies, East-West Center, University of Hawaii; and HUBERT V. EVERLY, Dean, College of Education, University of Hawaii. The moderator was HARRISON SASSCER, Staff Associate, American Council on Education.

RESOLUTIONS
COMMITTEES
INDEX

Conference Resolutions

Preamble

We note a gratifying change in the climate of opinion in the United States toward the importance of education in national and international affairs. We also recognize the need of sound leadership in developing the educational resources of the country to the highest possible level.

The federal government

1. We heartily congratulate President John F. Kennedy for recognizing that good education is not simply an instrument of national defense or of American foreign policy, but that it is the only sure foundation for an enriched individual life, a healthy national life and purpose, and a secure and peaceful international order. This recognition has done much in recent months to enable the American people to lift their sights and gain a realizing sense of their moral and social responsibilities.

2. We commend the Executive Branch of government for drawing upon the talent, knowledge, and resources of the academic community and the educational profession.

3. We welcome the prospect that government in our free society will assume a more active and responsible role in the support and improvement of higher education. At the same time the integrity and autonomy of higher education, along with its essential freedom from restrictive political and bureaucratic controls, must always be recognized and preserved.

Council of educational advisers

4. We recommend the establishment of a permanent council of educational advisers to the President of the United States, to aid in planning, formulating policy, and coordinating the government's role in the support and promotion of education.

Federal loans and grants for physical plant facilities

5. We commend the President of the United States and the members of the Congress for the active interest they are displaying in the improvement and expansion of higher education. To this end we recommend the passage of the following legislation:

a. To continue and expand the College Housing Loan Program, and to continue the present formula of interest rates on such loans

b. To introduce a new program of long-term loans on the same interest rate formula of the College Housing Loan Program to recognized colleges and universities for financing the construction of needed academic facilities

c. To provide grants to publicly and privately controlled institutions of higher education for meeting up to fifty per cent of the costs of construction of demonstrably needed academic facilities

d. To authorize and encourage federal agencies that sponsor and support research in colleges and universities to provide increased funds for the construction and improvement of physical plant facilities required for such research

e. To establish a program whereby the Department of Defense may provide funds to institutions having ROTC units for the construction and maintenance of the physical plant facilities required for ROTC purposes.

Federal fellowships

6. We recommend continuation of the fellowship program for doctoral candidates established by the National Defense Education Act.

We further recommend that this fellowship program be amended:

a. To authorize grants to institutions for fellowships in established programs of graduate instruction, in order to increase enrollment in these programs

b. To permit the awarding of fellowships to persons well advanced in doctoral programs to speed the completion of doctoral requirements

c. To authorize increased direct grants to institutions enrolling graduate students under the federal fellowship program.

Federal loan funds and scholarships

7. We recommend continuation of the federal student loan program on a permanent basis.

8. To identify students of high potentiality and, by reducing economic barriers, to encourage them to attend college, we recommend a federal scholarship program providing a minimum of 25,000 new scholarships annually.

9. We recommend the elimination of the requirement of the disclaimer affidavit in the present National Defense Education Act.

Research overhead costs

10. We recommend that the Congress take appropriate action to delete from future bills appropriating funds for the Department of Health, Education, and Welfare the restrictive rider limiting to fifteen per cent the payment of indirect overhead costs on research contracts and grants.

Institutes for college teachers

11. We recommend that under the sponsorship of the U.S. Office of Education a new program of institutes for college and university teachers be established to stimulate:

a. A critical re-examination and updating of the conceptual content and the illustrative materials of instruction in the several basic disciplines of the social sciences and the humanities

b. Substantial improvement in the effectiveness of presentation of these concepts and materials

c. Better evaluation of results of such instruction.

Higher education and international affairs

12. We commend to all colleges and universities the accumulating body of

scholarship as well as recent policy statements relating to the international role of American higher education, notably the report of the Committee on the University and World Affairs. We recommend that colleges and universities significantly increase their efforts in the international field in one or more of the following ways:

a. By promoting international studies at the undergraduate, graduate, and professional levels

b. By providing special programs and giving financial support to the educational interchange of students and faculty members as they move across national boundaries for study, research, and teaching

c. By undertaking, where appropriate, international cooperative programs for educational and cultural development of the newly emerging nations of the world

d. By training students and scholars for service in technical, cultural, and educational programs overseas

e. By undertaking basic research to build a body of fundamental knowledge concerning the peoples of the world, their cultures and civilization, their relationships to one another, and the role of education in social change and world affairs.

13. We recommend that colleges and universities organize appropriately for their international undertakings:

a. Each institution should re-examine its own internal organization with a view to mobilizing its resources most effectively.

b. Colleges and universities, foundations, and the federal government should coordinate their planning of international educational operations.

14. We recommend that the federal government redouble its efforts in promoting college and university programs in international education:

a. By supporting long-term educational and cultural development programs important in their own right for the enhancement of human dignity and freedom throughout the world. Such overseas programs should no longer be tied solely to economic or technical assistance schemes.

b. By coordinating its educational efforts on the international scene in order to achieve greater effectiveness among the diverse programs undertaken by the Department of State, the International Cooperation Administration, Department of Health, Education, and Welfare, the Office of Education, and other agencies. We commend the appointment of an Assistant Secretary of State for Educational and Cultural Affairs as a step in this direction.

15. We commend the spirit, the purposes, and the enthusiasm generated by the establishment of the Peace Corps. We recommend that the federal government invite colleges and universities into full partnership at the beginning of the enterprise, for we believe that an international youth service corps must be basically educative in character. To assure its educational success any such international program should be based upon careful selection, rigorous and appropriate training, effective use of institutions of higher education, detailed cooperative planning with the host country, and high quality professional personnel at every level of operation.

Equality of educational opportunity

16. The imperatives of political and moral responsibility as well as of effec-

tive international relations dictate an unassailably sincere and firm national position in favor of equality of opportunity for all. We recommend that American colleges and universities exercise vigorous initiative toward the achievement of this goal in higher education.

17. We recommend that the federal government, either by Executive or, if necessary, by Congressional action, take all measures required to assure that funds under the various programs of federal assistance to higher education are disbursed only to those institutions of higher education which do not discriminate or exclude on grounds of race, color, religion, or national origin. We commend those institutions which have abandoned the practice of exclusion with full confidence that such, in the long view, will serve in the interest of our national integrity, welfare, and world esteem.

College teaching

18. We recommend that colleges and universities:

a. Develop programs designed to encourage interest in college teaching in the early years of students' careers in higher education

b. Devise curricula and related experiences relevant to the teaching function and professional ethos

c. Construct an incentive and reward system which will enable teaching to compete favorably with employment in industry, government, and other esteemed professions

d. Press vigorously and persistently for maximum utilization of all available and potential college teaching talent so that fitness for appointment will not be overshadowed by irrational limitations related to race, color, ethnic identification, sex, or age.

Education of women

19. At a time when the values of the family need strengthening, when all human resources need to be used to the full, when the satisfying fulfillment of every personality is important in our form of society, we believe it is important to give special attention again to the education of women—in college and beyond. We recommend that individual colleges and universities study the adequacy and relevance of their programs for the education of women for their roles in modern society. We recommend further that the Association for Higher Education and other national educational bodies give important attention to developing clearer direction for the education of women.

Moral and spiritual values

20. Every human being, every nation, is inescapably locked in a struggle in which the choice among values is of ultimate significance. It is not merely involvement in the immediate struggle between competing ideologies, but a basic commitment regarding the nature of man which leads to the conviction that colleges and universities must concern themselves with the moral and spiritual development of our youth. Accordingly, we recommend that colleges and universities continue to find avenues for sharing with young people the richness of our spiritual heritage and encourage those values which make for the moral man.

Fraudulent institutions

21. We commend the efforts that have been made to expose the existence of diploma mills and other fraudulent institutions. To the states not now having adequate controls over such bogus institutions we recommend the adoption of legislation for controlling the establishment of all new organizations that are to be given the privilege of granting academic degrees. We recommend that federal and state authorities and the accrediting agencies continue to maintain vigilant watch for questionable operations by any and all purported institutions that advertise the giving of instruction or the granting of degrees.

Autonomy of public institutions

22. We recommend that publicly controlled institutions of higher education be given maximum autonomy in the management of their own operations, free from political influences and bureaucratic supervision that might affect adversely the quality of their educational services.

Optimum use of institutional resources

23. To provide in even a minimal way for students who will be seeking a college or university education and to deserve the necessarily enlarged support of our society call for optimum use of existing institutional resources and imaginative application of the newer resources for learning. We recommend:

a. That creative thought be given to developing time-scheduling patterns for collegiate education which will make maximum use of physical facilities and optimum conditions for employing the time of both students and faculty

b. That the colleges and universities of the nation continue to explore vigorously the use of new media for learning

c. That the federal government continue to support the use of new media for learning through the National Defense Education Act.

Support for higher education

24. Significantly improved financial support for colleges and universities has accompanied in recent years the heightened awareness of the strategic role higher education plays in our society. We commend the response of foundations, corporate enterprise, organized labor, alumni, and other concerned individuals, as well as federal and state governments to the needs of our institutions. The decade ahead will place a heavier burden than ever before on colleges and universities not only to meet expanded enrollments but also to deal with enlarged ranges of knowledge and an increasingly complex world. We recommend, therefore, not only a continuation but extension of support from all sources to enable colleges and universities to make their proper contribution to the common good, and a commitment by institutions to the judicious administration of the resources with which they are entrusted.

Appreciation

25. For their excellent leadership in planning and carrying out this Sixteenth

National Conference on Higher Education, we express our appreciation to President Arnold E. Joyal, Vice President Roy A. Price, and the members of the Executive Committee; to C. Addison Hickman and the members of the Planning Committee; to Executive Secretary G. Kerry Smith, Administrative Assistant Anne C. Yates, and the members of their efficient staff; to the speakers and the conference leaders; to the Board of Education of the City of Chicago; and to all who have collaborated to make this a profitable meeting.

NOTE: The above resolutions were passed by the conference participants on March 8, 1961. At a meeting on March 9, 1961, the Executive Committee, the official governing body of the Association for Higher Education, adopted the resolutions as passed by the conference with the exception of 5c, from which the two words "and privately" were deleted by the Committee.

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Index

Abrams, Irwin, 220
Academic ethics, 67
Academic freedom, 34, 93, 96, 207
Academic Freedom in Our Time, 93
Academic Marketplace, 117
Academic Mind, The, 172
Academic standards, 221
Academy of Arts and Sciences, 23
Accreditation, 125, 177
Administration, 103, 116, 128, 168, 181, 212, 240, 258
Admissions, 64, 79, 86, 102, 195
Advanced placement, 70
Advanced Placement Program, 149, 191
Akers, Milburn P., 114
Alabama, University of, 235
Albertson, Maurice L., 216, 219
Allen, Lucile, 100
American Association for the Advancement of Science, 30
American Association of Collegiate Registrars and Admissions Officers, 102
American Association of University Professors, 244
American Civil Liberties Union, 93, 163
American College Testing Program, 81
American Council on Education, 73, 75, 84, 106, 167, 189, 216, 231, 236
American Imagination, The, 26
Amherst College, 190
Anderson, Earl W., 192
Andover Study, 148
Angleman, Sydney W., 132
Antioch College, 221
Arbolino, Jack N., 148
Argonne National Laboratory, 190
Armajani, Yahya, 156
Armsey, James W., 200
Articulation, 70, 97, 148, 150, 204
Ashby, Lyle W., 241
Associated Colleges of Illinois, 191
Associated Colleges of the Midwest, 190, 191
Associated Midwest Universities, 190
Associated Universities, Inc., 190
Association for Higher Education, 11, 63, 76, 242
Association of American Colleges, 106, 240, 244
Association of American Medical Colleges, 122
Association of Universities for Research in Astronomy, 190
Athletics, 73, 169, 193
Atomic Energy Commission, 14, 19
Attendance, 237
Auburn, Norman P., 213
Australian "Out-Back Radio School," 260
Axelrod, Joseph, 160

Barnard College, 109
Bash, Wendell H., 147, 247
Baughman, George F., 188
Beckett, Samuel, 130
Beebe, George A., 227
Bell, Bernard Iddings, 209
Beloit College, 173
Bernard, Lloyd D., 119
Bestor, Arthur, 26
Bethel, Lawrence L., 92
Bhagavad-Gita, 43
Blackmer, Alan, 148
Blanchet, Waldo W. E., 253
Blue, Virginia, 213
Blue-Cross–Blue Shield Program, 245
Blum, B. S., 86
Blum, Virgil C., 207
Board of Education of the City of Chicago, 272
Board of Higher Education of the City of New York, 245
Bolling, Landrum R., 156
Books on higher education, 231
Boston College, 236
Bouslog, Charles S., 264
Boyle, Rena E., 123
Brameld, Theodore, 25, 30
Brave New World, 130
Briggs, Ellsworth R., 206
Brookings Institution, 255
Brooklyn College, 242, 245
Brown, C. W., 85
Brown, Harrison, 13, 16
Brown, James W., 248
Brown, Kenneth I., 105
Brown, Wm., 231
Brumbaugh, A. J., 147
Budget, *see* Finance
Buehrig, Edward H., 153
Bulger, Paul G., 232
Bunting, J. Whitney, 202
Burkhart, James A., 143
Business education, 162

California Institute of Technology, 45
California, University of, 64, 86, 190, 231, 239, 248
Campus climate, *see* Profiles of colleges
Caplow, Theodore, 115
Cardinal Newman, 109, 208
"Career Decisions of College Teachers, The," 236
Carleton, Richard D., 260
Carleton College, 240

Carlin, Edward A., 147
Carmichael, Oliver C., 160
Carnegie Foundation for the Advancement of Teaching, 240, 254
Carnegie Institute of Technology, 54
Carroll, Thomas H., 123
Center for Advanced Study in Behavioral Sciences, 34
Center for Cultural and Technical Interchange Between East and West, 263
Certification, 68, 124, 127
Challenge of Man's Future, The, 16
Change, 24
Chase, Francis S., 124
Chicago, The University of, 12, 32, 73, 190, 192, 239
Chicago Junior College, 260
Church-related colleges, 74, 207, 210
Chaminade College, 179
Coffman, L. D., 94
Cohen, Robert S., 135
Cole, Fred C., 193
Cole, T. W., Sr., 180
Coleman, James, 173
Colgate University, 247, 256
College and society, 3, 7, 10, 12, 26, 71, 74, 161, 201
"College and University in International Affairs," 254
College and University President at Work, The, 240
College Board Review, 173
College Characteristics Analysis, 174
College Characteristics Index, 72, 173
College-community relations, 205
College Entrance Examination Board, 70, 81, 149
College Housing Loan Program, 233, 267
College presidency, *see* Administration
"College Self-Study," 237
Collins, Paul E., 170
Colorado College, 242
Colorado State University, 216
Columbia University, 240
Colvert, C. C., 206
Committee for the Study of Mankind, 32
Committee on Information Activities Abroad, 255
Committee on Institutional Cooperation of the Council of Ten and the University of Chicago, 192
Committee on the University and World Affairs, 254
Communications, 11
Community college, *see* Junior college
Community of Fear, The, 13
Compensation on the Campus, 242
Conditions of work, 172, 242, 243, 244, 245
Confessions of St Augustine, 130
Confucius, 43
Constraint and Variety in American Education, 26, 141
Cook, Donald B., 254
Coombs, Philip H., 168
Cooper, Russell, 129, 147, 231
Cooperative programs, 189
Coordinated Extension System for the State of Michigan, 191
Coral, Max, 147
Coronet Magazine, 15
Council for the Advancement of Small Colleges, 176, 180
Counseling and guidance, 64, 101, 206
Creativity, 64, 89
Crisis In Education, 209
Crump, Cecil R., 104
Curriculum, 68, 80, 114, 141, 144, 149, 153, 161, 237, 247, 248, 249, 250, 251, 252
Cuthbertson, Kenneth M., 197
Cutler, Howard A., 223

Dale, Edgar, 257
Dalton, John H., 111
Danforth Foundation, 107
Darby, Lawrence, 262
Darling, Robert, 262
Davidon, William C., 12, 76
Davidson, Robert F., 132
Davis, James M., 101, 255
Davis, Saville R., 19, 76
Decision making, 38
de Crèvecoeur, 4
Dennis, Lawrence E., 214
Desegregation, *see* Segregation
Dewey, John, 4
Doctorate, 71, 157
Dodds, Harold W., 240
Do It Yourself Evaluation of Foreign Student Credentials, 102
Donohue, Thomas C., 161
Dressel, Paul L., 144
Drinan, Robert F., 123
Drummond, Donald F., 111
Du Bois, Cora, 103
Dulles, John Foster, 19
Dumke, Glenn S., 111
Dunn, Hugh E., 175

Earnest, Ernest, 95
Eckert, Ruth E., 231, 245
Edgar, Earl E., 219
Edgar Stern Family Fund, 198
Edinger, Oscar H., Jr., 206
Education for the Emerging Age, 25
Educational policy, *see* Policy making
Educational Testing Service, 81

Educational TV, 259
Eight Year Study, 191
Eisenhower, Dwight D., 19, 254
Elder, Robert E., 256
Eliot, Charles W., 2nd, 201
English, 101, 152
English, W. Francis, 160
Enrollment, 112, 185, 203
Erickson, Clifford G., 260
Ethics, *see* Professional ethics
European education, 4
Everly, Hubert V., 264
Examinations, *see* Testing programs

Facilities and equipment, 171, 191, 233, 267
Faculty salaries, *see* Salaries
Federal government, 99, 163, 214, 233, 238, 254, 267, 271
Fellowship programs, 107
Fellowships, 268
Ferme, Enrico, 12
Finance, 72, 98, 113, 178, 182, 185, 198, 209, 233, 238, 243, 267, 271
Finch, Jeremiah S., 109
Fine arts, 136
FitzGerald, Paul A., 108
Flemming, Arthur S., 213
Florida State University, 236
Flynt, Ralph C. M., 233
Folger, John K., 236
Ford Foundation, 98, 107, 199, 254
Foreign affairs, 164, 254
Foreign languages, 101
Foreign Leader Program, 255
Foreign policy, U.S., 19
Foreign students, 66, 101
Foreign Students and Higher Education in the United States, 103
Foster, Margery S., 243
Fourth National Conference on Exchange of Persons, 255
Fowler, David C., 160
Frankel, Charles, 3
Franklin and Marshall College, 242
Fraudulent institutions, 271
Freeman, Kenneth, 206
French, Sidney J., 147, 249
Freudenreich, Carl J., 128
Fulbright program, 107
Fullen, John B., 196
Fund for Advancement of Education, 168
Fund raising, *see* Finance
Furstenberg, Mark, 111
Future of Mankind, The, 30
Future Teachers of America, 107

Gallagher, Buell G., 256
Gardner, John, 197
Garraty, John A., 223
Gatzke, Herbert K., 192
Gay, Roger C., 180
General education, 68, 129, 133, 136, 140, 144, 247, 248, 249, 250, 251, 252
General Education, An Account and Appraisal, 129
George Fox College, 178
Georgia, University of, 235
Getzels, J. W., 87
Gildersleeve, V. C., 95
Goals for higher education, 28, 41, 63, 76, 144, 150, 181, 193, 197, 203, 207, 210
God in Education, 208
Goddard College, 251
Government, *see* Federal government *and* State and local government
Grades, 86
Graduate programs, 57
Graduate Record Examination, 176, 252
Graham, Edward K., 196
Grants and loans, 267
Grants-in-aid, 195
Greene, Paul C., 104
Grinnell College, 242
Grinter, L. E., 123
Grip, Carl M., Jr., 96
Gross, Reuben H., 166
Guidance, *see* Counseling and guidance
Guide to the Admission and Placement of Foreign Students, A, 102
Gustad, John W., 108, 236

Haggerty, William J., 156
Hahn, Lewis E., 202
Hall, T. William, 129
Hand, Learned, 219
Handbook of College Characteristics, 84
Harpers, 231
Harrell, C. E., 88
Harrington, Fred, 112
Harris, Seymour, 198
Harvard University, 57, 116, 190, 231, 239
Haverford College, 107
Hauch, Charles C., 104
Hawaii, University of, 263
Hawkins, Earle T., 213
Health Insurance Plan of the City of New York, 245
Henry, David O., 95
Henle, Robert J., 157
Henneman, H. J., 181
Henshaw, Clement L., 135
Herman, Harold W., 188
Herndon, Sarah, 139
Hesburgh, Theodore M., 219
Hickman, C. Addison, 272

Hicks, John, 88
Hicks, Weimer K., 166
Hill, A. T., 176
Hill, Knox C., 147
Hindsman, Edwin, 237
History, *see* Social sciences
Holifield Committee, 13
Holland, John L., 88
Hollis, E. V., 123
Holmes, Leslie A., 96
Holt, Charles C., 77
Horn, Francis H., 170
Howe, Kenneth E., 114
"How University of Minnesota Faculty Members Became College Teachers," 106
Hudson, Harriet D., 192
Humanities, 69, 136, 153
Humphrey, Richard A., 104
Hunt, William A., 88
Hunter, Armand L., 257
Huxley, Aldous, 130
Hynes, Emerson, 202

Iffert, Robert E., 88
Illinois, University of, 151
Indiana University, 190, 255
Institute for International Order, 226
Institute of International Education, 66, 75, 104
Insurance programs, 191
International Atomic Energy Agency, 16
International Cooperation Administration, 66, 75, 101, 217, 263
International education, 16, 30, 70, 75, 153, 217, 220, 224, 254, 263, 268
International Geophysical Year, 16
Ives Charles, 139

Jackson, P. W., 87
Jamrich, John X., 170
Jaspers, Karl, 30
Jastrow, Robert, 44
Jefferson, Thomas, 33, 40, 95
Jenkins, Timothy, 96
Jervis, Roy N., 170
Jobe, E. R., 123
Johnson, B. Lamar, 170
Johnson, Eldon L., 111
Johnson, Jack T., 140
Johnston, Neal, 200
Joint Committee on Atomic Energy, 13
Joint Testing Project, 79
Jones, Thomas E., 180
Journal of Geophysical Research, 50
Joyal, Arnold E., 272
Junior college, 74, 203

Kalamazoo College, 71
Katzenbach, Edward L., 234
Keegan, John P., 196
Keeton, Morris T., 147
Keller, Charles, 149
Kellogg, Edmund H., 227
Kelly, Harry C., 166
Kennedy, John F., 59, 105, 215, 233, 235, 255, 267
Kentucky, University of, 242
Kenyon Plan, 149
Keuka College, 221
Kidd, Charles V., 166
Kille, Frank R., 240
Killian, James R., 20
Kindsch, Robert, 260
Kirk, Grayson, 170
Knoblauch, A. L., 128
Kroepsch, Robert H., 192

Land, Edwin, 23
Lane Theological Seminary, 96
Languages, *see* Foreign languages
Laves, Walter H. C., 255
Lawson, Chester A., 133
Lazarsfeld, Paul, 172
Le Clair, Charles, 139
Lefkowitz, Judy, 262
Legislation, 233
Levi, Julian H., 202
Lewin, Raymond C., 119, 244
Leyden, Ralph C., 250
Liberal arts, 6, 39
Liberal education, 5, 7, 41, 144, 153, 157
Lilienthal, David, 218
Lincoln, Abraham, 17
Little, J. Kenneth, 166, 238
Local government, *see* State and local government
Logsdon, James D., 150
London *Times Literary Supplement*, 26
Long-range planning, 176, 182, 198
Lovinger, Warren C., 235
Lund, Kenneth W., 85

MacArthur, Douglas, 15
McCarn, Ruth O., 96
McCarthyism, *see* Academic freedom
McConnell, T. R., 147
McGee, Reece, 115
McGlothlin, William J., 120
McGrath, Earl J., 58, 140
McGraw-Hill, 231
McIntosh, Millicent, 109
MacIver, Robert M., 93
MacKinnon, Donald W., 89
McNamara, Robert S., 57
Macridis, Roy C., 156
Mais, Walter H., 147, 245
Manchester Guardian, 16
Mann, William R., 123

Marsee, Stuart E., 200
Martorana, Sebastian V., 213
Massachusetts Institute of Technology, 20, 216
Massachusetts, University of, 190
Master's degree, 66, 70, 157
Maul, Ray C., 119
Mayhew, Lewis B., 262
Mednick, Sarnoff A., 86
Medsker, Leland L., 67, 206
Mees, John D., 85
Memo to a College Trustee, 113
Merson, Thomas B., 206
Merton, Robert, 173
Messersmith, James C., 192
Meyner, Robert, 15
Michael, Lloyd S., 149
Michigan, University of, 64, 71, 87, 190, 239, 255
Michigan State University, 231
Midwest Inter-Library Center, 191
Midwest Universities Research Association, 190
Mills, Robert L., 184
Milton, John, 130
Minnesota, University of, 137, 231, 254
Missouri, University of, 71
Montclair State College, 242
Monteith College, 252
Moon, Rexford G., Jr., 97
Moral education, *see* Values
Morgan State College, 242
Morrill, J. L., 254
Morrill Report, 220
Morse, H. T., 137
Mosely, John D., 210
Mosier, Earl E., 213
Mount Holyoke College, 190, 242, 243
Muirhead, Peter P., 100, 234
Murray, Henry, 173
Mutual Security Act of 1960, 263

Nail, Clyde R., 206
Nasson College, 178
National Advisory Committee for Aeronautics, 44
National Aeronautics and Space Administration, 44
National Association of Foreign Student Advisers, 66, 101, 104, 255
National Collegiate Athletic Association, 73, 196
National Council for Accreditation of Teacher Education, 68
National Defense Education Act, 78, 238, 268, 271
National Education Association, 106
National Merit Scholarship, 81
National Student Association, 93
National Vocational Education Program, 234
Natural sciences, 133
Neff, Michael, 175
Nelson, William Stuart, 114
Ness, Frederic W., 108
Neudling, Chester L., 156
New England Board of Higher Education, 236, 237
New York Regents Examination, 85
New York University, 71
Next One Hundred Years, The, 16
Nonconformist, 64, 87
North Carolina, University of, 242
North Central Association, 179
Northwest Association, 178
Northwest Christian College, 179

On the Beach, 27
Oregon, University of, 242
Organization for European Economic Cooperation, 17
Overseas Americans, The, 154
Oxford, University of, 4

Pace, C. Robert, 171
Paine, Thomas, 33
Palmer, John C., 81
Paradise Lost, 130
Peace and war, 12, 76, 224
Peace Corps, 37, 75, 214, 254, 269
Percy, Charles, 15
Peters, P. R., 86
Pettengill, True E., 170
Pfnister, Allan O., 239
Philosophy, 30, 129
Physical Science Study Committee, 22
Pitkin Royce S., 96, 251
Pittsburgh, University of, 68, 71, 167
Poe, Paul A., 123
Policy making, 67, 93, 112, 165
Politics, 5
Population, 35
Porter, William E., 63
Potter, Paul, 156
Preliminary Scholastic Aptitude Tests, 84
President's Commission on National Goals, 235
President's Science Advisory Committee, 56
Price, Roy A., 272
Princeton University, 221, 240
Professional ethics, 115, 122, 157
Professional growth, 109
Professional schools, 120
Profiles of colleges, 72, 171
Program for Academic Facilities, 233
Public relations, 197

Rand Corporation, 76
Rankin, Alan C., 167
Raushenbush, Esther, 160
Reading, 261
Recruitment, 105, 115
Report of the President's Commission on National Goals, 197
Research, 57, 86, 191, 226, 236, 237, 238, 240, 268
"Research on College Students," 237
Reserve Officer Training Corps, 268
Rettig, Richard A., 114
Reynolds, James W., 203
Rhode Island, University of, 236
Rice, Harvey M., 180
Rice, James G., 147
Rice, Warner G., 160
Riesman, David, 26, 141
Robb, Felix C., 240
Rockefeller Brothers Foundation, 107
Rodes, Harold P., 184
Roper, Elmo, 98
Ross, Woodburn O., 252
Rossi, Peter, 173
Rottenberg, Simon, 119
Ruml, Beardsley, 25, 113, 187, 212
Russell, Bertrand, 30, 37
Russell, Roger W., 227

Safer, Louis T., 136
Saint Olaf College, 242
Salaries, 242, 243, 244, 245
San Diego Teacher Education and Professional Standards Conference, 124
San Francisco State College, 71, 242
San Jose State College, 248
Sarratt, Reed, 235
Sasscer, Harrison, 219, 264
Scheps, Clarence, 185
Scholarships, 78, 195, 233, 238, 268
School and College Study of Admission with Advanced Standing, 148, 191
Science, 8, 12, 17, 19, 39, 44, 69
Seamans, Robert C., Jr., 44
Secondary education, 124, 148, 150
Segregation, 34, 235, 270
Seidlin, Joseph, 175
Selden, William K., 213
Severino, D. Alexander, 92
Shank, Donald J., 223
Shriver, Sargent, 216
Shute, Nevil, 27
Sindlinger, Walter E., 206
Sister Margaret Gertrude, 152
Sixty College Study, 191
Skornia, Harry J., 258
Small colleges, 176
Smith, George B., 85
Smith, G. Kerry, ix, 272
Smith College, 190
Smith-Hughs Act, 234
Snow, C. P., 9, 30
Snyder, Richard C., 224
Social sciences, 140, 154
Sorokin, 81
South Florida, University of, 249
Southern Connecticut College, 242
Southern Education Reporting Service, 235
Southern Regional Council, 235
Southern Regional Education Board, 236, 237
Space age, 44
Sparling, Edward J., 202
Sprague, Mansfield D., 255
Standardized tests, *see* Testing programs
Stanford University, 34, 198, 242
State and local government, 99, 163, 271
Stecklein, John E., 108
Stephens College, 130, 250
Stern, George, 171
Stewart, Blair, 189
Stibal, Willard, 152
Stickler, W. Hugh, 147
Stokes, Joseph, 156
Stone, Ivan M., 223
Stovall, Thomas F., 143
Strategic Air Command, 15
Strauss, Lewis, 19
Student characteristics, 238
Student government, 174
Student participation, 174
Subject matter, 151
Sullivan, Robert F., 175
Survey of the United States Government Policy and Programs on Education, Science, Culture, Technical Assistance and Information, A, 255
Syracuse University, 171

Task Force on Exchange of Persons, 255
Taylor, Harold, 227
Taylor, Walter A., 123
Teacher education, 127, 157, 239, 268
Teachers College, Columbia University, 58, 75
"Teachers of Exceptional Children for the West," 237
Technology, 257, 258, 259
Teller, Edward, 19
Tennessee, University of, 235
Testing programs, 77, 81
Thackrey, Russell I., 234
Thielens, Wagner, 172
Thomason, James D., 114
Thucydides, 154
Totaro, Joseph V., 108

Toward General Education, 140
Travel-study programs, 220
Trippet, Byron K., 24
Turbeville, Gus, 180
Turnbull, Murray, 263
Two-year college, *see* Junior college

Ulich, Robert, 38
USSR, 19
Union Theological Seminary, 208
United Nations, 43
UNESCO, 16, 263
U.S. Advisory Commission on Information, 255
U.S. Commission on Civil Rights, 235
U.S. Department of Defense, 268
U.S. Department of Health, Education, and Welfare, 268
U.S. Department of State, 254, 255
U.S. Information Agency, 217
U.S. Office of Education, 102, 237, 268
U.S. Steel Educational Foundation, 242
University Bulletin, 249
University Center in Virginia, 191
Upton, Miller, 213
Urbanization, 201

Values, 37, 87, 97, 130, 197, 208, 270
Van Dusen, A. C., 123
Van Dusen, Henry P., 208
Vent, Myron H., 104
Viall, William P., 127
Vines, E. T., 206
Virginia, University of, 95
Vocational education, 5
Vroman, Clyde, 100

Wabash College, 29
Waiting for Godot, 130
War, *see* Peace and war
Watson, Thomas, 15
Wayne State University, 252
Webb, James E., 59
Weidner, Edward W., 223
Wellemeyer, J. Fletcher, 242, 246
Western, Donald, 114
Western Interstate Commission, 236, 237
Western New England College, 178
Whidden, Reginald W., 213
Whitehead, Alfred North, 141, 257
William Penn College, 179
Williams, C. O., 170
Williamson, E. G., 93
Wisconsin, University of, 190, 240
Wisconsin Audio Visual Television Project, 260
Wisconsin Physics Film Project, 260
Wittich, W. A., 259
Wolk, Richard, 88
Women, education of, 270
Wood, Evelyn N., 261
Wood Method, 261
Woodrow Wilson Foundation, 107
World Health Organization, 16, 263

Yale University, 190
Yates, Anne C., 272
Year-round college, 71, 167
Young, Michael, 81
Young, Richard H., 123

Zacharias, Jerrold, 22
Zorach case, 209